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## THE

# GLASGOW MEDICAL JOURNAL.

### THE

# GLASGOW MEDICAL JOURNAL.

#### EDITED BY

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THE

# GLASGOW MEDICAL JOURNAL.

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#### ORIGINAL ARTICLES.

# RECURRENT SARCOMATOUS GROWTHS AFTER AMPUTATION OF SCAPULA.<sup>1</sup>

BY HENRY E. CLARK, M.R.C.S. Eng., Professor of Surgery, St. Mungo's College; Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary.

THE operation was performed in July, 1895, and the patient continued in good health till May, 1896, when he began to lose flesh and to complain of shortness of breath and cough. He was seen by Mr. Clark during the last week of July, 1896, and was then found to present bosses at each side of the head, evidently sarcomatous, and intimately connected with the bone. He had constant irritating cough and difficulty of breathing; the right side of the chest was found to give a dull percussion note over greater part of its extent, and there was a suspicion a dulness at the left base. There was no evidence of recurrence in the immediate region of the former operation. He was admitted to the wards of the Royal Infirmary on 19th August, but died within twelve hours of his admission. The note of his condition was consequently very brief, and it

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<sup>&</sup>lt;sup>1</sup> Read at a meeting of the Glasgow Pathological and Clinical Society on 9th November, 1896, when Mr. Clark showed photographs and preparations from a patient whose left scapula he had removed for sarcoma, and who was shown to the Society on 14th October, 1895 (vide Glasgow Medical Journal, vol. xlv, p. 1).

ran as follows:—"On examination two large rounded tumours are seen, one on each side of the forehead high up, and one or two smaller ones are felt on the crown. Both lungs are dull to percussion, with coarse râles. Pulse weak and thready. Marked orthopnœa."



Secondary Sarcomatous Growths from diploc.
(Photograph taken after death.)

The post-mortem examination was made by Dr. D. M'Crorie,

and his report runs thus:-

"On both sides of the calvarium there are large tumour masses, and at the middle of the vertex there is a slight prominence of the bone, probably due to a tumour of the dura. There is a tumour mass on the left side of the chest

involving the fifth, sixth, and seventh ribs. On opening the chest the right lung is seen to consist almost entirely of one tumour mass. The lung is throughout adherent to the chest wall; but the adhesions are soft, can be easily broken down, and the bones are seen not to be involved in the tumour growth. The fourth rib, however, on this side is the site of another tumour about 3 in long and 11 in broad. The left lung is found to be firmly adherent to the tumour which involves the ribs, so that the lung and tumour can only be removed by taking away the ribs involved. This tumour is oval in shape, measuring about 4 in. from before backwards. and 3 in. from above downwards. At the lower part of the left lung is a smaller tumour, about the size of a hen's egg. On removing the calvarium the tumour masses above mentioned as seen on the head are found to involve the dura mater, and have exerted considerable pressure on the brain beneath, the convolutions of which are consequently flattened. The brain substance is perfectly healthy throughout. Each of the larger tumours measures over 2 in. in diameter; they have undergone some central softening. The heart and liver are healthy, as are also the spleen, pancreas, stomach, and Both kidneys are slightly enlarged and are somewhat congested, but show no tumour formation."

Observations.—We have here a local infection taking place through the intercostal spaces of the posterior part of the left chest, in the region of the scapula, leading to the formation of a tumour situated chiefly on the inside of the thorax, but slightly prominent externally. We have also a general infection, as evidenced by the extensive involvement of the right lung, the tumour on the fourth rib of that side, and the large masses formed on the head. Although there was no connection between the tumours on the right and left sides of the chest, some doubt might still remain as to whether they were not both the result of a local infection but for the existence of the tumours on the head, which can only have been the result of a general infection. As to the origin of the tumours of the calvarium, it is almost certain that they originated from the diplöic tissue of the skull bones, and consequently spread both inwards and outwards. It is matter of regret that sections were not made of some of the bodies of the vertebræ and one or two of the long bones, to ascertain if there was marrow infection elsewhere.

The case is an important one, as showing that even with a bone so thoroughly isolated as the scapula, where there would (à priori) be the best chance of thorough and effective

# 4 Dr. Lindsay Steven—On Jaundice of Early Infancy.

removal, recurrence may occur within twelve months, and dissemination take place with appalling rapidity. At the date of operation there was no adhesion of the scapula to the chest wall, the tumour was well encapsuled, the ribs and intercostal muscles showed no trace of tumour growths, and yet, thirteen months after, we find three of the ribs beneath the scapula have become involved in a new tumour. The non-removal of the arm was, however, fully justified by the fact that it showed no sign of infection, and remained free in movements and as useful as the other up to the last.

#### LECTURES ON CLINICAL MEDICINE.

#### DELIVERED IN THE GLASGOW ROYAL INFIRMARY.

By JOHN LINDSAY STEVEN, M.D.,
Physician and Lecturer on Clinical Medicine in the Infirmary.

V.

# ON THE JAUNDICE OF EARLY INFANCY, WITH A CASE OF CONGENITAL OBLITERATION OF THE BILE-DUCTS.

On the 19th of February, 1896, a male child, aged 4 months, along with its mother, was admitted to Ward 8, and during the two or three days that it lived after admission we had some opportunities of examining it together. The case was one of fatal infantile jaundice, and may serve as a text for a clinical lecture upon the varieties of jaundice occurring in early infancy. Before relating the case in detail, and demonstrating to you the abnormal condition of the liver, I shall make some remarks upon the general subject of jaundice occurring during the first days of life, or icterus neonatorum.

Icterus neonatorum may be of two varieties—it may be mild or grave.

1. The mild variety usually sets in on the second or third day after birth. The yellow discolouration is not equally marked all over, and is generally most pronounced upon the forehead, round about the mouth, and on the trunk. The urine in such cases may not stain the linen, and frequently the motions are not specially pale, but as a rule the con
1 Delivered 10th March, 1896.

junctivæ are distinctly jaundiced. The prognosis is almost always good, and in the course of eight or fourteen days at the most the yellow colour fades and the skin resumes its normal appearance. It is unnecessary for our present purpose to discuss in detail the various theories which have been advanced as to the pathology of this mild form of jaundice. You will find an admirable summary of them in the first volume of Henoch's treatise on the Diseases of Children. translated by Dr. John Thomson for the New Sydenham Society. Some authorities regard the jaundice as hæmatogenous in origin, the yellow colouring matter being due to a great destruction of red blood corpuscles taking place immediately after birth, as the result of a great number of red discs being forced into the infant's vessels from the placenta. Others explain the yellow discolouration of the skin and internal organs by supposing it to be due to an actual absorption of fully formed bile, hepatogenous jaundice. As to the discolouration being bilious there seems to be no doubt, although as to the actual mode in which it is brought about we still require more light.

The affection is very common, and is well known among the poorer classes in our midst, by whom it is frequently spoken of as the "yellow-gum." The following figures from Baginsky's handbook (1889) will give you some idea of its great frequency:—Porak found it 198 times in 248 children, or 79.8 per cent; Kehrer, 474 times in 690 children, or 68.7 per cent; Elsässer, 215 times in 434 children, or 49.5 per cent; Seux, 64 times in 406 children, or 15.6 per cent; Cruse, 261 times in 308 children, or 84.46 per cent. These figures are sufficient to show that even at the lowest estimate it is a very frequent disorder. If we take the sum of the figures just quoted, we find that the disease occurred 1,212 times in 2,086 children, or 58.1 per cent. It is said that on the whole

boys are more frequently attacked than girls.

As regards the treatment of this affection little need be said. Henoch and Baginsky are both agreed that the prognosis of uncomplicated cases is always favourable. Henoch says—"One need scarcely speak of treatment since the affection disappears spontaneously. All that is required is good nursing, with attention to the bowels when necessary."

2. The grave variety of icterus neonatorum is associated with serious organic lesions, and is almost always a fatal disorder. It is sometimes a septicæmic condition, due to an erysipelatous inflammation attacking the navel, not infre-

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quently the result of "puerperal infection of the umbilical wound."

Occasionally this form of infantile jaundice is caused by syphilitic hepatitis, and Henoch has reported a case in which he was of opinion that the affection of the liver had originated during intra-uterine life. The child died deeply jaundiced at the age of 10 weeks, and in the liver the "bile-ducts were found post-mortem to have been entirely transformed into thick fibrous masses filling the portal fissures."

In a number of cases the icterus is due to congenital absence or obliteration of the bile-ducts. Fortunately this affection. of necessity in the long run fatal, is comparatively rare, and Henoch, with his large experience, had in 1889 only met with three cases, two coming to a post-mortem examination. One of the best monographs in our language on congenital obliteration of the bile-ducts is that of Dr. John Thomson, of Edinburgh, published in 1892, to which I would refer you for exceptionally full and accurate details of the affection. In his monograph Dr. Thomson has collected and carefully tabulated forty-nine cases which were confirmed by postmortem examination, and before proceeding to describe in detail our own case I may state to you a few of his conclusions, which are of clinical importance. With regard to the health of the parents his statistics do not establish anything of great etiological significance. In only five out of the ninety-six parents was evidence of syphilis obtained; and in several cases one or both parents had suffered severely from some digestive derangement. There also occasionally seems to be a "tendency for the disease to occur in more than one child of the same parents." In this regard a case reported by my friend, Dr. John Glaister, is worthy of note—"Out of seven children in the same family four had died jaundiced, and two were less severely jaundiced and recovered." The jaundice may set in from the day of birth up to nine or ten days after it; in a very few cases it may not appear for a fortnight or more. Bile is generally to be made out in the urine, and, after all the meconium has been passed, the motions are usually white. If they are white from the first, it indicates that the obliteration of the biliary passages has taken place at a very early period of intra-uterine life. Spontaneous hæmorrhage is one of the commonest complications, having occurred in fully half of the recorded cases. Life may be prolonged from one week to four months; in two of the cases the children lived into the eighth month. Those of you who desire to study the pathology of this interesting

disease may do so in the pages of the monograph itself; it is unnecessary for me to enter upon it here, further than to say that Dr. Thomson does not think that syphilis has very much to do with the causation of the diseased condition

of the biliary passages.

We are now in a position to consider in detail the clinical features and post-mortem appearances of our own case.¹ The child had been seen in the Dispensary by Dr. Walter K. Hunter, who, recognising the gravity of the condition, advised the mother to seek admission to the ward. The mother stated that she first noticed the discolouration about a week after the child's birth, when she had risen for the first time after her confinement. Her attention was first drawn to the dark colour of the child's eyes and cheeks; but it was not until about three weeks after this that the idea of the child being the subject of jaundice was suggested by a neighbour. She then consulted a medical man, who prescribed powders without any good effect.

The baby was the first, and was born at full time without any trouble. During the last two months of pregnancy the mother was very much troubled with "bile," vomiting very frequently, and taking a violent dislike to many kinds of food. Previously she had always been healthy, except for occasional bilious attacks. The father was perfectly healthy. The parents of the child were newly married, and were each about 22 or 23 years of age. The paternal grandfather, who, as well as the father, was seen by myself, was a healthy-looking man of middle age. The maternal grandfather died of phthisis pulmonalis, the grandmother of general debility.

The baby had all along been fed at the breast; and from the first the bowels moved quite regularly, but the motions were persistently pale, and, as described by the mother, "like curdled milk." During the first month after birth the child was very fretful, but was otherwise well. On special inquiry as to whether the yellow discolouration of the skin was present at the time of birth, the mother was unable to say, but she thinks it must have been. There was no trouble with the cord or the umbilicus after birth. During the week or two preceding admission the child was frequently seized with vomiting after taking the breast, but this was likely to have been the result of over-distension, as it generally occurred when he was fed after waking from a long sleep.

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<sup>&</sup>lt;sup>1</sup> An account of this case has already been published in the Archives of Pediatrics, October, 1896, and is here reprinted with a few verbal alterations.

On admission the child was intensely yellow, the discolouration being perhaps most strikingly seen in the conjunctive. Otherwise the baby looked very healthy and well nourished. Although, on the whole, he was very fretful and cried constantly, at times he was cheerful, jumping and crowing, and smiling in his mother's lap, even after his admission to the ward

A careful physical examination of the heart, lungs, and liver gave no sign of any abnormality. The urine had a clear greenish-yellow colour; there was little or no sediment, the reaction was acid, and it contained no albumen. There was not enough to take the specific gravity, and the urine could only be examined on one occasion.

On the evening of the 21st of February vomiting took place, and the vomited matter was tinged a pink colour as if

it contained blood.

On the morning of the 22nd of February the motions of the bowels were for the first time observed to be black and tarry. There was moderate diarrhea all day, and the evacuations were uniformly black in colour, and sometimes mixed with bright red blood. Throughout the day the child was very fretful, and on account of its evidently debilitated condition, it was found necessary to administer brandy somewhat freely. About 8:30 P.M. on the same day he became somewhat suddenly blanched, and it was impossible to feel the pulse. The respiration soon became embarrassed, and death took place about 10 o'clock. After death, some bright red blood escaped from the mouth and the rectum.

With very great difficulty indeed I obtained permission for a partial *post-mortem* examination, which was performed in our presence by Dr. Charles Workman, whose report I shall

now read :-

"Summary of post-mortem.—Absence or obliteration of hepatic and cystic ducts. Cirrhosis of the liver. Hæmorrhage into stomach and intestines.

"Externul appearances.—The body is that of a fairly well developed child for the age of 4 months, and it is also very well nourished. The skin and conjunctive are stained of a deep yellow colour. On opening the abdomen (permission having been obtained for this only, and that with great difficulty), the stomach and intestines were found to contain a considerable quantity of blood, which had evidently escaped from the greatly congested capillaries without any gross rupture. The spleen was of large size, firm in consistence, and deeply congested. The pancreas presented a remarkably

healthy appearance, and it was possible to press some whitish fluid from its duct into the duodenum through the papilla. The gall-bladder contained only clear colourless fluid with white shreds; it was of small size and somewhat shrunken in The cystic duct, the hepatic ducts, and the common bile-duct had either never become patent, or had been transformed into white fibrous cords, and it was evident that no bile had ever made its way into the gall-bladder or into the duodenum. The liver was of fairly large size, and presented a dark green colour, with a remarkable marbled appearance of the cut surface. The free surface of the organ was the seat of distinct but very fine granularity, quite evidently of cirrhotic origin. The kidneys were very markedly lobulated, and their capsules were removed without difficulty. On section they were found to be deeply congested, but the cortex and pyramids presented quite normal relationships.

"Microscopical examination of sections of the liver, stained in alum carmine solution, revealed a very marked cirrhosis, with in many parts the portal areas choked with leucocytes. The cirrhosis involved groups of lobules, and was therefore of the multilobular variety. The rows of liver cells in many of the lobules were separated as by dilated capillaries; the microscopic bile-ducts were numerous, of large size, and frequently filled with inspissated bile. In many parts of the hepatic tissue granules of bile pigment were observed."

We had, on the whole, during the life of the child, little difficulty in arriving at the opinion that the jaundice in this case was likely to be due to some organic obstruction or

defect of the biliary passages.

It is perfectly obvious that with a serious structural defect of the kind demonstrated at the post-mortem, and which I now show you in the dissected specimen, treatment could have been of no avail; and the lesson the case teaches us is that whenever an icterus neonatorum persists longer than a week or two we should be prepared for the presence of a serious organic lesion and an ultimately fatal issue. If you compare the history of the case with the quotations I have made from Dr. Thomson's monograph, you will see that almost in every respect it conforms to the description which he has so well given. As to the actual cause of death in this case, I think there can be no doubt that it was due to the sudden and somewhat severe hæmorrhage from the stomach and bowels.

### LANDOLT ON SQUINT.

#### By FREELAND FERGUS, M.D.

In our previous communication on the important views of Dr. Landolt there are two sentences which are perhaps liable to be misunderstood if taken apart from the context, and even when taken with it are not altogether free from misapprehenion. The sentences are—"Landolt still considers strabismus as a muscular affection. Recently some very great authors have regarded it as a disturbance of the innervation." Now, what was present to our mind when we wrote the paragraph which contains these sentences was that Dr. Landolt does not accept the newer views of strabismus, such as that so prominently associated with the name of Hansen Grut. It never occurred to us that any one would interpret these sentences as meaning that so great and undoubted an authority as Landolt still held the all but obsolete so-called anatomical theory that concomitant squint is caused by defect in the structure of the muscle or in its insertion.

To attribute any such view to Dr. Landolt would, indeed, be to do him a great injustice. He holds, as his writings abundantly show, the theory of concomitant squint first enunciated by Donders. To this he adheres as the true explanation of the large majority of cases, and of the truth of which increasing experience only gives him additional proof.

So long ago as 1887, in his well-known text-book, Landolt wrote of concomitant squint—"This form of deviation has also been called muscular." . . . "This designation does not, of course, pretend to describe its nature." . . . "Here again an affection of the innervation of the movement of the eye

plays the principal part."

If further proof were wanted of Dr. Landolt's exact position, it could be found in his recent address at Carlisle, to which we referred. In that address he points out that the weakness of the external recti muscles which he finds in convergent squint, and of the internal in divergent squint, is not the cause but the consequence of the strabismus.

And that is just what we wished and attempted to point out—that the concomitant squint is due to disturbed function. It never occurred to us that any one would take the statement as meaning that either Landolt or we believed in the theory of excessive shortness or defective insertion of individual muscles. Dr. Landolt has no faith or belief in the newer and

what we may call the metaphysical explanation of strabismus; and in the main, subject to certain reservations, we agree with him.

Like most ophthalmic surgeons, and, indeed, far more than most, Dr. Landolt values the restoration of binocular fixation. Hence his well-known orthoptic treatment by stereoscopic and other exercises. This treatment, as well as that with atropine and trial glases, would never commend itself to any intelligent surgeon who believed in the so-called anatomical theory.

#### CLINICAL ESSAYS ON INSANITY.

By JOHN T. MACLACHLAN, M.D., Dumbarton, Late Senior Assistant, Hartwood Asylum, Lanarkshire.

T.

#### MELANCHOLIC, MANIACAL, AND DEMENTED STATES.

Insanity reveals itself in a patient when his natural instincts. feelings, and impulses are perverted or lost, when his observation and judgment become so defective that he labours under false beliefs, out of which he cannot be reasoned, and when his sense organs fail to register impressions correctly, so that hallucinations arise and cloud his mind. Insanity, therefore, implies a perversion or loss of the natural faculties and feelings of man. It does not necessarily mean that the whole man is changed. It may consist in flaws or slight defects of mind. It may be even compatible with a man leading a useful life, provided he does not obtrude his own special weakness on his neighbours. It almost always implies a loss of the higher forms of mental energy. As in the evolution of man the finer faculties are the last to be developed. so when mental deterioration sets in these commonly are the first to be lost or impaired.

The diagnosis of insanity rests to a large extent on the questions—How is this patient different from his former self when he was in sound health? In what way does his conduct, his language and beliefs differ from his neighbours who are reckoned to be sound in mind? How is he affected by his surroundings?

A patient may talk intelligently enough, but his actions may show that he does not act in accordance with his beliefs. He may have lost will power, so that he is unable to avoid

doing harm to himself. Thus, some patients converse quite rationally, and yet, if opportunity presented itself, would commit suicide, and frequently they cannot give any adequate explanation of their destructive tendencies. It would seem that they are the victims of their impulses, and have little or

no inhibitory power over them.

Suicidal patients are generally depressed, listless, and speechless, and have ceased to find the outer world of sufficient interest to arouse their attention, and they do not respond in the usual way to external influences. They tend to become untruthful, cease to love their neighbours, and live in a world all to themselves. They heed little about food, have feeble digestion, constipated bowels, and often a catarrhal condition of the stomach. They are generally pale, with dull eyes,

drooping eyelids, and inactive muscles.

Patients the victims of melancholia are apt to be suicidal in their tendencies, according to the degree of anguish occupying their mind. The hypochondriacal form of melancholia is an exception. Here the patient's depression arises from an intense desire to live and to feel well, but they have subjective sensations which become real evils as the mind of the patient ponders over them. These sensations by and by become fixed and dominant thoughts in the mind, and tinge the complexion of his whole life, and constitute his insanity. Again, melancholia may not amount to anything more than a simple loss of energy, both bodily and mental. Melancholics avoid all pursuits likely to draw upon their feeble capital. They are listless, quiet and pensive in manner, generally preferring to sit in a corner of the room out of the way and not trouble or be troubled by anyone.

Again, melancholics have generally a feeble circulation, a depressed state of the body reflecting a depressed state of the mind. They lack spontaneity of thought and action. As a rule they tend to become thin, but this emaciated condition is probably dependent on gastric troubles. Some melancholics are quite stout, although always flabby. Their hands are apt to be the seat of chilblains in cold weather. Their head is generally drooping, and they walk in a sort of automatic way. Their time reaction is slow. Melancholia may occur under a great variety of forms, from a simple loss of energy to a state of the most abject misery, in which destructive tendencies may assert themselves in a terrible manner—the patients seizing any knives they see to cut their throat, &c.

. There is a strange form of melancholia known as resistive melancholia. This resistive form is distinguished by the

apathy of the patient and by the resistance the patient offers to any change of position or attitude. The attendant feels them to be so contrary in their ways. Such patients generally sit still in a corner, but offer stout resistance, usually of a passive character, to being moved. In its acute form the disease is a highly dangerous one, the sufferers refusing food and drink or even to be comforted in any way, and not infrequently they die of exhaustion.

Again, it is not uncommon to have melancholia mixed up with a good deal of excitement. This is apt to take place in acute melancholia, where the tension generated by the extreme misery finds vent in wringing of the hands and strong suicidal or even homicidal exhibitions.

The gentler forms of the disorder are witnessed in patients who are listless, and wish to sit in their chairs all day in dreamy or vacuous states of mind, having no heart for work or play, finding it almost impossible to rouse themselves for any duty or even conversation of any kind. Many of these cases depend on high tension pulse, with defective elimination of waste products and occasionally with albuminuria. Disease of the heart and atheromatous arteries are not uncommon in this condition. Defective and languid circulation through the brain is a predisposing if not an actual exciting cause in many cases. Aperients, liver, skin, and kidney stimulants are most serviceable in such states, with iron and strychnine tonics.

Subacute catarrh of the stomach and bowels is so often associated with depressed and gloomy states of the mind as to be regarded in the light of cause and effect. It is accompanied with a lack of ambition and a feeling that life is not worth living and a burden. In the young and impulsive, suicidal thoughts are apt to arise and be nurtured and carried into execution. Here, foods that readily ferment in the stomach should be avoided, and alkalies given to clear away the mucus along with easily digested nitrogenous food. Stimulants also will be needed, and perhaps antiseptics to check gastric fermentative changes.

Cases occur from time to time in which melancholics sink into a state of stupor and are practically dead to the world. There may or there may not have been a previous state of excitement of a maniacal character. These cases occur more frequently in females than in males. Occasionally some moral shock can be traced as the exciting or predisposing cause of the attack. In well marked cases, the patient is motionless, mindless, and speechless, sitting on the chair with hanging

down head, somewhat puffy looking face, but not actually cedematous; the facial lines are blurred, and all the tissues lacking tone and hanging loose. The eyelids are generally closed and adhering from slimy mucus. The mouth generally is slavering, and the patient can scarcely be roused from this lethargic state, being almost insensitive to pain. The patients may be pinched severely, but they do not seem to mind it, and will scarcely move out of the way of the aggressor. They have to be helped with their food. The pupils and knee-jerks may be normal, and on recovery the patients may remember most, if not all, that transpired during their illness. There is generally a catarrhal condition of the digestive organs, and even a purulent discharge from the nostrils. This stuporose state may last for weeks or months and the patients recover, but even then they frequently remain listless, indifferent, and useless.

The maniacal forms of insanity are shown in the patients' behaviour, chiefly in their want of harmony to their environment. Slight causes disturb their mental equilibrium. A look, a gesture may excite a violent outbreak of temper. Maniacal patients are unduly irritable, impulsive, and aggressive. The mental reflexes are very acute and exaggerated. Their inhibitory power over the lower centres is greatly defective. As a consequence, noisy speech, disorderly conduct, and incessant restlessness are prominent tokens of this condition. Maniacal patients are apt to be very incoherent, flying off at a tangent from the subject matter of conversation, and to some extent the degree of power of concentration may be taken as a fair guide in prognosis.

In the more acute forms of maniacal excitement, all the functions and faculties of man may be seriously disturbed. The skin is apt to get dry, wrinkled, parched, and earthy coloured; the digestive tract is prone to suffer in a similar way, the tongue becoming dry and baked-looking, sordes collecting around the lips and teeth, foamy saliva gathering between the tongue and teeth, and a peculiar slaty tinge appearing on the face; while the sclerotic coats of the eyeball appear unduly visible, and a strange light in the pupil of the eye. Frequently there is a wild tragic expression of countenance, the eyeballs being very prominent, the feature muscles continually moving; the hair being dry, and masses of it becoming grey and tossed about in wild confusion.

This restless state may find expression chiefly in noisy, incoherent bawling and shouting or in muscular unrest. This motor excitement resembles choreic movements a good

deal, consisting in little tremulous jerky movements, chiefly of the arms, while the patients clutch at objects very firmly—a sort of tonic spasm. The knee-jerks are generally somewhat exaggerated, but the pupils are not necessarily dilated. rule the pupils do not respond well to the stimulus of light. The patients generally look as if they were in a state of alarm or terror, the gestures being as if they were repelling some Then delusions of identity and hallucinations of hearing are very outstanding features of acute maniacal excitement. The nature of the delusions is largely influenced by the general character of the patient and his antecedent life. the minds of some raving maniacs are filled with religious doubts and fears and misgivings; they may imagine themselves martyrs for the sake of their religion, and invite one to kill them for their beliefs. They have lost all notion of the proper relation of things, and some peculiar thought or feeling or desire may dominate their conduct entirely. More frequently their mind is a mass of wild and tangled ideas succeeding each other in disconnected fashion and cropping up in wild and rampant profusion.

As a rule, the appetite for food is entirely gone, and the sufferer is frequently under the dread of being poisoned, and may refuse food entirely on this score, requiring to be fed by the stomach-tube to prevent death by exhaustion or starvation.

Acute typhomania, to which most of the above description applies, is a very fatal malady, on account of the great motor excitement and the accompanying exhaustion, as also on account of the great difficulty in feeding such patients and the disordered state of the digestive organs. Further, the prospects of recovery may be seriously handicapped through the loss of sleep, and sedative drugs may be urgently needed: but these latter require to be pushed, otherwise they are practically useless. Hyoscine  $(\frac{1}{200}$  to  $\frac{1}{100}$  gr.) hypodermically is most useful where muscular unrest is the chief feature of Sulphonal, 20 to 30 gr., and large doses of bromide of potassium are also useful and safe. The bowels should be cleared out once and for all with croton oil (1 to 2 minims), and it is astonishing to observe how a sharp purgative relieves many of the symptoms. The diet is important, and should be liquid foods, with artificial helps such as pepsine. Large quantities of stimulants are necessary, and the feedingtube will be in constant demand.

In the subacute forms of mania, the patients may be quiet, well-behaved, and industrious so long as they are humoured and wheedled, but they are, nevertheless, very "touchy," and

are abnormally easily "put out." If their opinions be called in question they will probably lose their temper, answer questions in a loud and threatening way, and probably become aggressive if conversation be persisted in. Such patients flush readily, their eyes getting full and staring, their speech hurried, and generally they exhibit the signs of maniacal excitement. They are apt to be complaining and capricious in their moods. Their appetite may be greatly increased, and not easily satisfied. Frequently they indulge in noisy chatter, or in singing at the top of their voice, or nurturing schemes of revenge against some one or other, and it may be difficult to say how far such patients are responsible for their actions. At the same time, many of these cases may be subdued by austere treatment, and a bullying patient turned into a useful worker by being taken "firmly in hand" by a combination of attendants acting in concert.

Recurrent mania is recognised by periods of exaltation alternating with periods of depression and exhibiting a marked periodicity. It is as if there was an ebb and flow movement of badly guided nervous energy. The exalted moods may be true maniacal attacks with noisy incoherent chatter or pugnacious exhibitions and temper displays, or the patients may vent themselves in scolding or singing at the top of their

voice, dancing, or other fantastic movements.

The periods of depression are frequently mixed up with listlessness and inertia of body and mind, a condition often bordering on stupor, and the patient may be apathetic or slightly melancholic. The condition, as a rule, is one of apathy rather than one of misery. The patients are slack and run down, and the softer emotions are shown by the mind of the patient brooding over death and the grave, and frequently the patients shed tears as doleful thoughts arise.

Recurrent mania is an inveterate form of insanity, and the patients seem to be quite well in the interludes of the disease, but the maniacal attacks recur again and again, and a state of

dementia supervenes.

Mania may occur under an almost endless variety of forms—from acute typhomania to a simple chronic maniacal state, in which the patient is abnormally irritable, impulsive, and aggressive, but in whom no definite delusions can be discovered.

In monomaniacal forms of insanity it is astonishing how the minds of patients may be perfectly clear and sane on most things, yet a dark spot of mental obliquity is there, from which the patient seldom recovers. This form of insanity is probably slow and insidious in it origin, the general mental

wellbeing of the patient deceiving the friends or the casual observer, until the mad idea has taken considerable root, forming the centre of the mental circle of the life of the patient. The whole mental life of the patient may be complexioned by his monomania, which may be revealed in an endless variety of ways. Thus we have the middle-aged man, whose sole madness consists in the idea that he cannot swallow his food or that his food does not digest and he will not eat, or that he requires opening medicine when, in truth, he is in great need of having his stomach and bowels well filled with nutritious foods. These patients, chiefly men, are generally miserable-looking creatures, with gaunt faces and somewhat startled-looking, restless eyes, and in their character they are avaricious, untruthful, and evasive, and, in short, their moral courage is reduced to a minimum.

Again, many monomaniacs are given to day dreaming, and their dreams seem to them living realities. They may imagine that they are living in palaces, and have no end of wealth and grandeur; or again, they may be suspicious, and imagine their friends are burglars, thieves, and robbers. As a rule they are whimsical and capricious, sometimes being sweet and humorous in their ways, at other times scolding and extremely offensive, and the one state may succeed the other with

lightning rapidity.

All forms of insanity tend towards a state of dementia with the lapse of time. In its complete form the patient is reduced to an automaton, will-less, and powerless for conserving and maintaining his or her life unless supervised by others. There are infinite degrees and grades of dementia, and at best it is a relative term. The acute forms of insanity, if not recovered from, are especially apt to end quickly in dementia, and this is especially true of adolescent insanity. On the other hand, climacteric insanity may go on for years before the stage of dementia is reached.

In typical cases of dementia there is great incoherence of speech and ideas, and the patient cannot be pinned down to talk of the subject matter on hand. What he does say is a mass of disconnected and rambling speech. It takes some effort to induce a confirmed dement to speak, and he displays considerable agitation when roused to the occasion. As a rule, such patients prefer to sit on their chairs and lapse into vacuity of mind. All dements are extremely lazy, wanting in volitional power, and having little or no spontaneity of mind. Many of them even lack the power of speech, but this is exceptional. In those cases that do not speak there is No. 1.

generally a melancholic cloud hanging over them. Demented patients are lacking not only in mental but also in moral qualities, being untidy and dirty in their habits, and filthy over their meals, which they bolt down. Their appetite is often ravenous, and in a general way they have no controlling power over their animal passions. Their circulation is feeble, and they are weak in body as well as in mind. All their muscles lack vigour, and they move about slack and with hanging down heads. Their general nutrition is defective. They nearly all get thin, their hair becoming very dry, and it may stand out like bristles. Their memory is gone, but their reflexes, both bodily and mental, remain. Their sensitive faculties are greatly dulled. They feel less acutely than their sound neighbours, and they do not seem to catch cold readily. However, dements can be trained a good deal with patience and labour, and they are practically clay in the potter's hands.

#### THE BIRTH AND DEATH OF PAIN.1

By S. WEIR MITCHELL, M.D.

Forgive a moment, if a friend's regret, Delay the task your honouring kindness set. I miss one face to all men ever dear; I miss one voice that all men loved to hear. How glad were I to sit with you apart Could the dead master use his higher art To lift on wings of ever lightsome mirth The burdened muse above the dust of earth, To stamp with jests the heavy ore of thought, To give a day, with proud remembrance fraught, The vital pathos of that Holmes-spun art Which knew so well to reach the common heart. Alas! for me, for you, that fatal hour! Gone is the master! Ah! not mine the power To gild with jests, that almost win a tear, The thronging memories that are with us here.

The Birth of Pain! Let centuries roll away; Come back with me to nature's primal day. What mighty forces pledged the dust to life! What awful will decreed its silent strife!

<sup>&</sup>lt;sup>1</sup> A poem read, 16th October, 1896, at the commemoration of the fiftieth anniversary of the first public demonstration of surgical ansesthesia.

Till through vast ages rose on hill and plain, Life's saddest voice, the birthright wail of pain. The keener sense, and ever growing mind, Served but to add a torment twice refined, As life, more tender, as it grew more sweet, The cruel links of sorrow found complete When yearning love to conscious pity grown Felt the mad pain thrills, that were not its own.

What will implacable, beyond our ken,
Set this stern fiat for the tribes of men!
This, none shall 'scape, who share our human fates:
One stern democracy of anguish waits
By poor men's cots—within the rich man's gates.
What purpose hath it? Nay, thy quest is vain:
Earth hath no answer: If the baffled brain
Cries, 'tis to warn, to punish—Ah, refrain!
When writhes the child, beneath the surgeon's hand,
What soul shall hope that pain to understand?
Lo! Science falters o'er the hopeless task,
And Love and Faith in vain an answer ask,
When thrilling nerves demand what good is wrought
Where torture clogs the very source of thought.

Lo! Mercy ever broadening down the years Seeks but to count a lessening sum of tears. The rack is gone—the torture chamber lies A sorry show for shuddering tourist eyes. How useless pain, both church and state have learned, Since the last witch, or patient martyr burned. Yet still, forever, he who strove to gain By swift despatch a shorter lease for pain Saw the grim theatre, and 'neath his knife Felt the keen torture, in the quivering life. A word for him who, silent, grave, serene, The thought-stirred master of that tragic scene. Recorded pity through the hand of skill, Heard not a cry, but, ever conscious, still In mercy merciless, swift, bold, intent, Felt the slow moments that in torture went While 'neath his touch, as none to-day has seen In anguish shook life's agonised machine. The task is o'er; the precious blood is stayed; But double price the hour of tension paid. A pitying hand is on the sufferer's brow— "Thank God 'tis over." Few who face me now Recall this memory. Let the curtain fall For gladder days shall know this storied hall!

### 20 DR. WEIR MITCHELL—The Birth and Death of Pain.

Though Science patient as the fruitful years, Still taught our art to close some fount of tears, Yet who that served this sacred home of pain Could e'er have dreamed one scarce-imagined gain, Or hoped a day would bring his fearful art No need to steel the ever kindly heart.

So fled the years! while haply here or there Some trust delusive left the old despair; Some comet thought—flashed fitful through the night, No lasting record, and no constant light. Then radiant morning broke—and ampler hope To art and science gave illumined scope.

What Angel bore the Christ-like gift inspired! What love divine with noblest courage fired One eager soul that paid in bitter tears For the glad helping of unnumbered fears, From the strange record of creation tore The sentence sad, each sorrowing mother bore, Struck from the roll of pangs one awful sum, Made pain a dream, and suffering gently dumb!

Whatever triumphs still shall hold the mind, Whatever gift shall yet enrich mankind, Ah! here, no hour shall strike through all the years, No hour as sweet, as when hope, doubt and fears, 'Mid deepening stillness, watched one eager brain, With God-like will, decree the Death of Pain.

How did we thank him? Ah! no joy-bells rang, No pæans greeted, and no poet sang, No cannon thundered, from the guarded strand This mighty victory to a grateful land! We took the gift, so humbly, simply given, And coldly selfish—left our debt to Heaven. How shall we thank him? Hush! A gladder hour Has struck for him, a wiser, juster power Shall know full well how fitly to reward The generous soul, that found the world so hard.

Oh! fruitful Mother—you, whose thronging states
Shall deal not vainly with man's changing fates,
Of freeborn thought, or war's heroic deeds
Much have your proud hands given, but nought exceeds.
This heaven-sent answer to the cry of prayer,
This priceless gift which all mankind may share.

A solemn hour for such as gravely pause
To note the process of creation's laws!
Ah, surely, He, whose dark, unfathomed Mind
With prescient thought, the scheme of life designed,
Who bade his highest creature slowly rise,
Spurred by sad need, and lured by many a prize,
Saw, with a God's pure joy, His ripening plan,
His highest mercy brought by man to man.

#### CURRENT TOPICS.

CLINICAL DEMONSTRATIONS TO MEDICAL PRACTITIONERS.—
The physicians and surgeons of the Glasgow Royal Infirmary, with the consent of the Managers, have arranged to give during the winter and summer sessions weekly demonstrations of cases in their wards to all members of the profession who care to attend. Every Friday afternoon, from four to six o'clock, one of the physicians or one of the surgeons will be in his wards for this purpose, the members of the staff taking duty in rotation. The first demonstration will be given by Mr. Henry E. Clark in his wards on 8th January, at 4 P.M.

It is intended that these demonstrations shall be given during the months of October, November, December, January,

February, March, May, and June.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—
The following office-bearers have been elected for the session 1896-97:—Honorary President—Prof. A. R. Simpson, Edinburgh. President—Malcolm Black, M.D. Vice-Presidents—J. Nigel Stark, M.B., and Alex. Miller, L.R.C.P.Ed. Treasurer—J. Lindsay, M.B. Secretary—Robert Jardine, M.D. Reporting Secretary—A. W. Russell, M.A., M.B. Puthologist—J. M. Munro Kerr, M.B. Councillors—T. W. Jenkins, M.D.; A. R. Gunn, M.B.; H. C. Reid, M.B.; A. Richmond, M.B.; G. Balfour Marshall, M.D.; Alice J. Maclaren, M.D.

GLASGOW EASTERN MEDICAL SOCIETY.—The annual dinner of this Society took place on Friday evening, 6th November, 1896, in White's Restaurant, Gordon Street. About thirty gentlemen sat down, including amongst the invited guests Professors Gairdner, Coats, and Knox. In the course of the evening feeling reference was made to the loss the Society

had sustained since its last similar meeting by the death of Dr. Mather, its first President, Prof. Gairdner paying a pathetic tribute to his memory. He referred to him as a man of very remarkable character in many respects; a sound, and honest, and honourable practitioner; a thoroughgoing gentleman, careful of every rule of medical honour; a man of fine tastes and fine literary instincts, of large breadth and sympathy.

GLASGOW MATERNITY HOSPITAL.—Dr. R. Jardine has been appointed physician, and Dr. John Edgar assistant-physician, to the Hospital.

ABERDEEN ROYAL PHYSICIANS.—In the Aberdeen Journal of Thursday, 22nd October, 1896, over the initials "R. S. R." we notice the first of a series of articles on this subject. It is of great archæological and historic interest, and might well find a place in the pages of the new periodical, Janus, which we notice among our reveiws. The royal physicians memorialised in this article are Donald Bannerman (d. 1373), physician to King David II; David Chamberlane, who was physician to Queen Anne, consort of James VI and I, and who may probably have been a friend of our own Peter Lowe: Arthur Johnston, physician to James I and Charles I, and second only to George Buchanan among the Latin poets of Scotland; and Sir Alexander Frazier, Robert Morison, and Thomas Burnet, three physicians who, apart from their medical attainments. were distinguished by their loyalty to the Stewart dynasty. The paper is a valuable one, and from internal evidence we learn that the writer is the author of a work entitled the Universities of Aberdeen. We hope that the papers may be collected and published in a separate form.

Commissions in the Army Medical Staff.—The Director General, Army Medical Department, informs us that on 5th February next, and following days, a competitive examination for thirty-five commissions in the Army Medical Staff will be held. For details see our advertisement pages.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.—The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about 180 dols., will be made on 14th July, 1897, provided that an essay deemed by the

Committee of Award to be worthy of the prize shall have been offered. Essays intended for competition may be upon any subject in medicine, but cannot have been published, and must be received by the Secretary of the College on or before 1st May, 1897. Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within the name and address of the author. It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award. The Alvarenga Prize for 1896 was not awarded.

NEW PREPARATIONS, DRUGS, &c.—Filmogen (Dr. Schiff) or Liquor Adhæsivus is a new medium intended to serve as an easy and elegant means of applying to the skin such drugs and remedies as are used in dermatology. Painted on to the skin, it immediately forms a thin, non-sticky, flexible film, which adheres firmly, and is unaffected by mechanical friction or washing with water. It further possesses some penetrating power, and thus materially enhances the action of the incorporated drugs. It does not in any way irritate the skin. Filmogen consists of a solution of nitrated cellulose in acetone, to which is added a very slight quantity of oil to render the film flexible after evaporation of the acetone. Messrs. Thomas Christy & Co., 25 Lime Street, London, E.C., have sent us specimens, and we think their preparation well worth a trial.

## MEETINGS OF SOCIETIES.

### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING III.—6TH NOVEMBER, 1896.

The President, DR. W. L. REID, in the Chair.

I.—TUBERCULAR DISEASE OF RIGHT KIDNEY; NEPHRECTOMY.
By Dr. Jas. A. Adams.

E. A., set. 28, hospital nurse, was admitted to my wards on 11th June, 1896, complaining of severe pain and frequency

of micturition. The condition was first troublesome five years ago, when it yielded to medicinal treatment, and only lasted a fortnight. About two years ago the same symptoms returned, and have been gradually getting worse since that date.

The frequency of micturition was very troublesome, patient having to micturate every three-quarters of an hour. There were never more than 3 oz. of urine passed at one time, and never any incontinence. The amount of urine was not greater than usual; it always contained albumen. The frequency was about the same day and night.

There was pain of a dull character in the urethra, aggravated while the urine was passing, and becoming less as the bladder was emptied. The urine, according to the patient's statement, was very muddy, often containing clotted blood at

the end of the act of micturition.

About two years ago patient had a bad attack of enteric fever, was four months in bed, and during that time the present trouble continued. She was admitted to the Western Infirmary, where the bladder was washed out, the pain being intense on passing the catheter. She improved greatly after the bladder had been washed out several times. There has never been pain in the back or loins.

Patient was transferred to the surgical side of the Western Infirmary, and an exploratory incision was made in the right lumbar region; but there was nothing abnormal detected. The urethra was then dilated and the bladder examined with the cystoscope, but nothing definite was discovered. The patient was then dismissed from the hospital, and was ultimately sent to me by Dr. John Ritchie in the hope that something could yet be done for her. The condition above described had become much aggravated, and her consequent misery was very great.

Menstruation was normal, but the bladder symptoms

became worse at each menstrual period.

On examination of the abdomen there was a slight fulness in the right lumbar region, and a cicatrix, the result of the first operation. A movable tumour, painful on pressure, was also evident in this situation. Marked pain was elicited by pressure over the bladder; there was no enlargement of the spleen or liver.

The urine averaged 54 oz. daily, with a specific gravity of 1015. It contained a thick, white, muddy sediment, but no tubercle bacilli could be detected. The temperature fluctuated

between 100° F. and 103° F.

On 10th July Dr. Newman examined the bladder with the cystoscope, and reported that the mucous membrane was

hypertrophied and presented varicose veins.

On 21st July I made a median incision in the anterior abdominal wall, and examined both kidneys. The left was normal, but the right was enlarged and nodular. The median incision was then closed, and the diseased kidney removed by the usual lumbar incision. A drainage-tube was left in the wound for three days. Great sickness followed the operation, and persisted for five days. Temperature rose to 101° F. on 22nd July and then subsided to 99° F.

Within the first twenty-four hours, 27 oz. of urine were removed by catheter, and on account of the persistent sickness most of the nourishment was given per rectum. On 23rd July, 27½ oz. of urine were passed, and the quantity gradually rose day by day. The patient was sent to the Convalescent Home on 2nd October and is now moving actively about.

The urine is now clear although it still contains albumen,

and the bladder symptoms have improved.

The portion of ureter removed with the kidney was tubercular, and I regret I did not adopt some local treatment, such as washing out the bladder through the ureter, and injecting some form of iodoform emulsion.

Mr. H. E. Clark thought the result of the operation was so far satisfactory; but he feared that, in spite of the negative results of cystoscopic examination, there was tubercular infection of the lower urinary passages, an inference suggested by the persistence of some undue frequency of micturition. He doubted, therefore, whether a completely favourable issue could be anticipated. It was necessary, also, to keep in mind the possibility of a general infection arising from some tubercular focus left behind after excision of the kidney. He had known a good immediate result of the operation, and the patient die eighteen months later of phthisis pulmonalis.

Dr. Adams recognised the possibilities suggested by Mr. Clark. In answer to the President, he stated that he preferred to remove the kidney by an incision in the loin rather than through the anterior incision, because he believed there was special risk of infecting the peritoneum in removing a tubercular kidney. Hence he shrank from opening the peritoneal

cavity in such cases.

Mr. Clark expressed his agreement with this statement.

II.—ABDOMINAL SECTION FOR ACUTE INTESTINAL OBSTRUCTION
THE RESULT OF TUBERCULAR PERITONITIS; RECOVERY.

#### BY DR. JAS. A. ADAMS.

J. H., a threadworker, aged 14 years, was admitted in a comatose condition to my wards on 19th March, with symptoms of acute intestinal obstruction of three days' duration. Patient was never a strong girl, and for several months before admission complained of general weakness, with loss of flesh and appetite. She had a cough with purulent expectoration.

On the night of the 16th March she was suddenly seized with acute pain in the abdomen, and violent vomiting, accompanied by great thirst. Patient always had a tendency to constipation, but after the onset of the acute symptoms it became absolute and no flatus passed. No blood had escaped

per rectum.

The vomited matter was markedly stercoraceous and offensive, while the temperature was 98.4° F., and the pulse could hardly be detected. She was unconscious and much collapsed.

There was no general abdominal distention, but round the umbilicus there were distended coils of intestine visible through the abdominal wall. No peristalsis existed, and the abdomen was not markedly tender at the region of the appendix or elsewhere. Rectal examination was negative. With considerable hesitation I determined to operate. After a drachm of chloroform had been used the anæsthetic was stopped and the operation finished without any expression of pain from the patient. Two hypodermic injections of ether were administered, as the girl showed alarming symptoms of collapse while on the operating table.

A median incision discovered an advanced tubercular condition affecting the lymphatic glands and peritoneum. A band completely occluded the small intestine about its middle, and the entire small intestine had to be unravelled, necessitating the rupture of three tubercular abscesses. These were mopped out with artificial sponges and dusted with iodoform, but the peritoneal cavity was not flushed. The wound was closed with deep and superficial interrupted catgut stitches,

and a long splint applied.

On the night of the operation the temperature rose to 100° F., but fell next day, and remained normal for two days. Sickness was troublesome, but yielded to a sinapism over the epigastrium.

For the first twenty-four hours she was fed entirely by the

rectum, but afterwards small and frequent quantities of milk were given by the mouth. The bowels moved freely twenty-four hours after the operation and continued to act daily.

On 22nd March the temperature rose to 104° F., and in consequence the wound was examined, but it was found to be sential and healed by first intention

aseptic, and healed by first intention.

No abdominal distention occurred, but slight pain was com-

plained of in the hypogastric region.

The lungs showed some dulness on percussion at the apices, where also a few râles were present. The urine was normal.

The patient was sent to the Home on 19th May, and had improved greatly in appearance, having gained considerably

in weight.

On her return to her own home, with its poor surroundings, she developed a very severe cough and died of phthisis pulmonalis on 26th October, about eight months after the

operation.

This case is interesting as illustrating how a young patient may recover although apparently in articulo mortis, and as bearing out the experience of surgeons that an abdominal incision frequently arrests the progress of tubercular disease in the peritoneal cavity. We know that in tubercular disease of joints we can aid the vis medicatrix natura by clearing out and dusting with iodoform abscesses that retard the healing process; and we also know that many cases of tabes mesenterica get well by pursuing an expectant treatment. I am strongly, however, of opinion, that where tubercular peritonitis induces constipation, anorexia, and abdominal distention, an incision will enable us to make a correct diagnosis, and will facilitate the patient's recovery.

Dr. Renton thought too much credit could not be given to Dr. Adams for undertaking this operation with the patient almost in extremis. Success in such cases is imperilled by the use of chloroform and by time spent in vainly endeavouring to thoroughly cleanse the peritoneal cavity. If necessary, a local anæsthetic may be used to spare the pain of the incision through the skin. There are many cases of tubercular peritonitis (apart altogether from intestinal obstruction) which are benefited by abdominal section, though the difficulty of explaining this result was similar to the difficulty of explaining the disappearance of inflammatory formations and the shrinking of malignant growths after purely exploratory

abdominal incisions.

Dr. Hawthorne hesitated to assent to the doctrine that abdominal incision was to be regarded as a simple form of

treatment in cases of tubercular peritonitis. He believed the outlook in the majority of these cases was much better than was generally stated, and under rest in bed, appropriate feeding, and the steady use of mercurial liniment to the abdomen, he had seen a number of children recover, even to the extent of almost complete removal of the evidences of peritoneal thickening. For several years he had watched cases that had passed through Dr. Gairdner's wards, and his conviction as to the value of medicinal treatment was so strong that he could not allow some remarks that had been made to pass without indicating his dissent from teaching which would seem to advocate abdominal section almost as a matter of routine in cases of tubercular peritonitis.

Dr. Newman believed the sound position in reference to appendicitis, tubercular peritonitis, and other conditions in which abdominal section might be proposed, was that every case must be judged on its individual merits. There was no general rule for interference, and the great responsibility and difficulty arose in selecting the cases that were suitable and the time when operation was demanded. Many cases of tubercular peritonitis and other abdominal conditions get well spontaneously, and probably many cases successfully operated on would have recovered had they been left alone. He would not encourage the opening of the abdomen in tubercular peritonitis unless in exceptional cases.

Dr. Adams, in reply, said he had never seen any evil consequences from opening the abdominal cavity. He dissented entirely from Dr. Hawthorne's position, and would expect benefit from abdominal incision in a case of tubercular peritonitis, just as incision is beneficial when an abscess exists in

the neighbourhood of a tubercular joint.

III.—ABDOMINAL SECTION FOR INTUSSUSCEPTION IN AN INFANT OF FIVE MONTHS; RECOVERY.

#### By Dr. BARLOW.

The case which I desire to bring before you to-night will be of interest, I hope, because of the typical history of the ailment and the speedy relief which followed operative interference. Agnes G., aged 5 months, was admitted into Ward 28 of the Glasgow Royal Infirmary on 13th September, 1896, at 3:30 A.M., suffering from abdominal pain and from sickness. The mother supplied the following history. The child had always been very healthy and plump. Its bowels had been moved on the day before admission. Eighteen

hours before admission the child began to cry, draw up her legs, and strain, but nothing came away from the rectum. Eight hours before admission the child vomited frequently. The mother went to a chemist, who gave a "powder" to relieve the vomiting; it, however, gave no relief. Two hours later a little slime and blood passed from the bowel, and on this being repeated, the mother consulted Dr. Patrick, of Bridgeton, who recognised the condition, ordered removal to the Infirmary, and gave a note, which I received, stating that the case was one of intussusception.

When I saw the child, the pupils were slightly contracted -possibly the effect of the "powder"—there was abdominal uneasiness, and blood around the anus. On examination of the abdomen by palpation, a "sausage-like" tumour on the right of, and slightly above the level of, the umbilicus. movable slightly in all directions, and causing discomfort on compression, was easily made out. Under deep anæsthesia the mass was again examined, and I attempted to reduce the intussusception by inflating the large intestine with hydrogen As the gas was introduced the mass moved downwards. and to the right, and during manipulation of the mass I was conscious of its diminishing in size by at least one half. The inflation combined with manipulation was continued for a few minutes, but the tumour remained. The abdomen was. then opened in the middle line, and the affected area of gut easily found and brought near the abdominal wound. intussusception was of the ileo-cæcal variety. Reduction was effected by gentle traction on the ileum combined with compression of the mass, but the serous surface of the invaginated portion was red and rough for a distance of 2 in., and here recent adhesions were gently broken down. The portion invaginated was thickened. The margins of the abdominal wound were brought together by a row of sutures passed through the serous layer, a second row through the divided aponeuroses, and a row through the skin. The usual dressings. were applied.

There were two points noted during the operation—(1). The small space available between the umbilicus and pubes in a fat child aged 5 months; (2) that while there was distention of the small intestine generally, that part of the ileum adjoining the intussuscepted portion for a distance of a foot. was empty, ribbon-like in form, and with its muscular coat in active contraction. It seemed to me that this active peristalsis, however induced, may have been the cause of the intussusception. I afterwards learned that the mother, who

suckles the child, had been eating quantities of fruit on the 12th September. This may have been the intestinal irritant in the case of the child.

There is not much to tell of the history of the case after the operation. A drop of laudanum was ordered when anæsthesia passed off, and teaspoonful doses of milk were given hourly. This amount did not make the child contented, and on the day following the operation, and just before the time of my visit to hospital, the catgut stitches in the wound gave way during a spell of crying and struggling, and when I saw the patient many coils of small intestine were outside the abdominal cavity protected by a warm sponge. Chloroform was given, the intestines returned, and this time eight silkworm-gut stitches were passed through all the layers of the abdominal wall, and the edges of the wound approximated.

The mother was allowed to suckle the child, and the child

appeared happy.

Two days later I gave the mother castor-oil, and by the following day there had been several evacuations from the bowels of the child.

The stitches were removed on the tenth day, and the child left hospital two days later or twelve days after operation.

Mr. H. E. Clark congratulated Dr. Barlow upon the result of the operation. He quite agreed with the practice of prompt operation as soon as the usual methods for attempting reduction of the intussusception had failed. Though he had succeeded in such cases by manipulation under chloroform, injection and insufflation were in his experience far from satisfactory. The danger of delay was great, and the recognition of this, and the confidence with which abdominal section could now be undertaken, should encourage the profession to urge incision as the treatment demanded in such cases.

Dr. Renton endorsed the position stated by Mr. Clark. He recognised the value of early diagnosis and operation, and in Dr. Barlow's case, and in several which he himself had published, every credit was due to the practitioners who saw the cases and advised operative interference. When delay was permitted there was risk of peritonitis, and this reduced the chances of success almost to the vanishing point. In more than one instance he had been impressed with the absence of anything in the general condition suggesting the serious danger of the child, and an intussusception might be present with little or no abdominal distention. He observed that Dr. Barlow used catgut in stitching the abdominal wall, this, in his experience, was not so satisfactory as silk or silkworm-gut.

Dr. James Adams advocated the application of a long splint after abdominal operations. It restrained the movements of the patient and prevented the possibility of such a misfortune as occurred in Dr. Barlow's case. Another practice which he regarded as advisable in abdominal section is excision of the umbilicus, on account of the difficulty in rendering it aseptic. Dr. Adams prefers catgut to silk in suturing the abdominal wall.

The President referred to the practice of suturing the abdominal wall in layers. He preferred to use silkworm-gut sutures, and to pass them through the whole thickness of the abdominal wall. If subjected to strain, as by the movements of a restless patient or by coughing, there was less chance of

the wound giving way if united by this method.

Dr. Barlow, in reply, said that he would never again suture the abdominal wall of a young child in layers; he was quite satisfied with the method he practised in re-stitching the wound. He wished to associate himself with Dr. Renton in giving every credit to Dr. Patrick, who had seen the child in private practice, and recognising the condition, had sent it to the hospital.

IV.—THREE CASES OPERATED ON FOR DISPLACEMENT OF THE KIDNEY, THE SYMPTOMS OF ONE CASE SUGGESTING RENAL CALCULUS.<sup>1</sup>

#### By Dr. NEWMAN.

CASE I.—T. L., aged 50, an ironmoulder, who was under the care of. Dr. John Service, of Mossend, was admitted to the Royal Infirmary on 30th January, 1893, complaining of severe pain in the region of the left kidney, shooting thence downwards and forwards in front of the abdomen. These paroxysms of pain usually came on after exercise, and lasted for several minutes at a time, while during the six months prior to admission he almost constantly suffered from an aching pain in the left side. At the onset of the attacks of pain the urine was of a dark red colour, and contained a large quantity of blood, but gradually the quantity of blood diminished and the urine became bright red.

The patient was a very well nourished man, short in stature, weighed 14½ stones, and very stout, so that an examination of the renal region with the hand did not reveal anything; even firm pressure applied to the part did not give pain, and no

<sup>&</sup>lt;sup>1</sup> These cases were operated on in the Glasgow Royal Infirmary during the summer of 1896.

increased muscular resistance could be made out. During residence in hospital the patient was kept strictly in bed, and from 30th January till 6th March he only complained of the dull aching pain; he had no paroxysmal attacks, and no hæmaturia or albuminuria. He was re-admitted on the 8th of May, 1893, having suffered from several attacks since he left the hospital in March.

On the 10th May the following note was made:—"Until the present time the symptoms all pointed to the presence of a stone in the left kidney. The pain was clearly increased by exercise, and relieved by rest, and so also was the hæmaturia. Yesterday he had an attack of renal colic and hæmaturia, and the following is a note on the condition and quantity of the urine:—

1893.	Ounces of Urine.	Remarks.
Мау 9, 6 г.м.,	12	Urine clear; trace of albumen; a few tube-casts. No pain. Sp. gr., 1013.
,, 10 р.м.,	4	Pale urine. Sp. gr., 1020.
., 11 г.м.,		Severe paroxysm of pain in left side.
May 10, 5 A.M.,	6	Urine dark porter colour. Sp. gr., 1024. Blood abundant. Blood-casts. Pain still continues severe.
,, 8 а.м.,	18	Pale red blood-stained urine. Sp. gr., 1008. Pain gone.
,, 12 Noon,	15	Trace of blood only. Small quantity of albumen. Sp. gr., 1011.
,, 7 р.м.,	9	Clear urine. Sp. gr., 1015. No albumen. No tube-casts.

Now, the presence of blood-casts in the urine suggests the source of hæmorrhage as being in the renal substance rather than the consequence of a calculus in the pelvis of the kidney.

19th May, 1893.—The patient has remained well, and since 8 A.M. on the 10th inst. there has been no pain; and no blood, tube-casts, or albumen since 7 P.M. on the same day.

The presence of blood-casts in the urine was observed for the first time on the 10th May, and gave quite a new aspect to the hæmaturia, which prior to this time was regarded as due to the presence of a stone in the left kidney.

The patient remained well till the 1st June, when he left the ward, not having had any recurrence of pain or of

hæmaturia.

Re-admitted 22nd June, 1896.—Since leaving the hospital in June, 1893, the patient has suffered more or less pain in the region of the left kidney, which is increased by exercise

and relieved by rest in bed. The pain and the hæmaturia present the same characteristics as formerly, but now there is considerable tenderness on palpation at a spot midway between the crest of the ilium and the last rib on the left side. On account of the stoutness of the patient palpation fails to reveal the condition of the left kidney.

Considering that rest in bed only gave temporary relief, and that the patient was incapacitated from following his occupation by the frequency of the attacks, he was advised to submit to an operation for the purpose of ascertaining the precise condition of the left kidney, and, if possible, of relieving it permanently.

On the 29th June an incision was made down to the left kidney, when it was found to be moderately movable, displaced upwards and forwards, and rotated on its short axis, so that

the lower margin of the organ pointed forwards.

The adipose capsule was freely separated from the fibrous covering of the kidney, and a considerable portion of the loose fat removed. The fibrous capsule was then incised, stripped off the cortex for half an inch on either side of the incision, and stitched to the parietes. A large drainage-tube was inserted, and the deep parts of the wound kept open for ten

days, after which it was allowed to heal.

In this case the symptoms—viz., paroxysmal renal pain increased by exercise and relieved by rest; hæmaturia; tenderness on palpation in the left renal region—all pointed to calculus in the kidney; but the presence of a few tube-casts, and traces of albumen without pus or blood, indicated that the morbid condition affected the tissue of the kidney, while the occasional appearance of blood-casts pointed to the origin of the hæmorrhage. At the operation a sufficient explanation was found. The rotation of the kidney, so that the lower margin presented forwards, must have caused the ureter and blood-vessels to be coiled round one another, and so impeded the circulation of blood. As a consequence, more or less severe passive hyperæmia was produced, and varied in degree according to the precise position occupied by the kidney at different times.

The patient reported himself on 2nd November, 1896, and stated that while occasionally he has had slight pain in the cicatrix, he has had no return of the old renal pain, nor has any blood appeared in the urine. A specimen of urine

examined is free from albumen and tube-casts.

CASE II.—Mrs. N., aged 44, was sent to me by Dr. James William White, Strathbungo, and was admitted to the Royal Infirmary on 31st August, 1896, complaining of more or less

severe pain in the left side.

Though never robust the patient enjoyed fairly good health until the onset of the present illness, which she dates back to three years ago, when, after lifting a heavy bed, she suffered for the first time from pain in the left side. At the onset the pain was only occasionally present, and mostly when the patient was fatigued, but during the last two years it has been almost constantly present. It is always increased by work, by much walking or other exercise, also by constipation and before the menstrual periods. In these circumstances the pain is very severe, and is accompanied by sickness but never by vomiting.

The patient is not much emaciated, but the abdominal wall is lax, so that the left kidney is easily made out as an oval swelling which, while the patient is in bed, is usually situated immediately under the left costal cartilages, the hilum of the organ when the kidney is in this situation pointing downwards and outwards. The kidney can be freely moved, pushed downwards into the pelvis, upwards under the ribs, and to within an inch of the middle line. When the kidney is displaced there is a distinct flattening in the left lumbar region, and when the organ is handled a sickening sensation is experienced. The point at which the patient complains most of pain is just below the last rib on the left side, and in a vertical line drawn from a point on the iliac crest midway between its middle and the posterior superior spine. Urine normal at all times.

Recently the attacks of pain and sickness have been so severe and frequent that the patient is anxious to have an

operation performed for her relief.

10th September.—Nephrorrhaphy was performed to-day, when the left kidney was found to be very freely movable. A considerable portion of the adipose capsule was removed, and the whole of it was freely separated from the kidney; the fibrous capsule was also incised and partly stripped off, and both capsules were stitched to the margins of the wound in the parietes.

The patient made a rapid recovery, and on 6th November

reports herself completely relieved.

CASE III.—Mrs. M., aged 31, was advised to come to the Royal Infirmary by Dr. James Lawrie, Greenock. On admis-

sion she complained of great general weakness, emaciation, and a dragging pain in the right flank which commenced six years ago. Until six months before her last confinement it had been bearable, but since then the pain has been constantly present and very severe. Lately the gastric disturbance also has been much increased. The pain is most severe at the menstrual periods, and is increased by any exercise; in character it is dragging and sickening, and is only partly relieved by rest in bed, but if she continues to remain out of bed she suffers from vomiting, gastrodynia, and headache. For many months she has been able to detect a movable swelling in the right lumbar region, and can herself move it backwards and forwards at pleasure.

A distinct movable kidney is made out on the right side, which, when the patient is at rest, is generally found under the right costal cartilages, and the hilum points downwards and outwards. The organ can be freely moved to the middle line and easily pushed beyond it, can be pressed downwards into the pelvis and upwards under the costal margins. The point at which the patient suffers most pain is close to the

normal position of the gall-bladder.

14th September, 1896.—Nephrorraphy was performed in the same way as in Case II. The patient made a rapid recovery,

and is now (6th November) well.

The point of interest in Cases II and III is that, while in both there were severe sympathetic symptoms, such as sickness, dyspepsia, and pain, in neither were there any indications of direct renal disturbance such as may arise from torsion of the blood-vessels, nerves, or ureters. This may be explained by the position occupied by the kidneys. In both cases the kidney was simply thrown upwards, forwards, and inwards, so that while the vessels and ureters might thereby be considerably stretched, they were not at any time twisted round one another, nor were the ureters kinked so as to cause a transitory hydronephrosis.

Dr. Service had had under his care the first case described by Dr. Newman, and the symptoms had so distinctly suggested renal calculus that patient at one time was admitted to the Western Infirmary with a view to operation, which was, indeed, only avoided by the collapse of his resolution at the last moment. Various medicinal measures having failed to produce relief, patient at last submitted to surgical treatment, and the result has been in every respect satisfactory.

Dr. Lawrie was familiar with one of the cases of floating

kidney. The patient had suffered much pain, especially during each menstrual period. This had now entirely disappeared. He referred to a case in which the undue mobility of the kidney appeared to be due to a fall, and in which attacks of pain came on when the patient lay upon his left side. In this case also operation was followed by complete relief.

## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1896-97.

MEETING I.—12TH OCTOBER, 1896.

The President, Dr. Donald Fraser, in the Chair.

#### I.—BRANCHIAL FISTULÆ.

By Dr. RUTHERFURD.

Dr. Rutherfurd brought this case before the Society on account of its rarity, and to show the appearance and condition of the parts previous to operation. The patient, a boy, aged 14, presented evidence in the neck of a branchial fistula on each side; that on the left side being represented by a cicatrix, the obliteration having been determined, a few years ago, by cauterisation; that on the right persists, and behaves alternately as a fistula and a cyst. The fistula on the right and the scar on the left, were characteristically attached to the subjacent structures; the latter being attached to the thyroid cartilage, and the former by a firm band running up to the hyoid bone. Dr. Rutherfurd regarded these fistulæ as repesentatives of the second or third branchial clefts.

# II.—TUMOUR OF THE PONS IN A CHILD. By Dr. Finlayson.

Dr. Finlayson said that on 13th April, 1896, in showing a specimen of a tumour of the pons to this Society, he referred to a child in a dying condition, in his ward in the Children's Hospital, whose case presented the typical symptoms of this lesion. The child was admitted on 9th January, and died on 24th April, 1896. She was 4½ years old on admission. The family history presented no indication of tubercular disease; but there was a scar on the child's neck, dating from her first

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year, very like the remnant of old scrofulous gland disease. She had had no special illness except whooping-cough two years before the present illness. There was no history of a knock on the head, but some history of a fright from a dog before her symptoms began. The examination of her chest failed to reveal any signs of tubercular disease; but for some time before death she was so feeble that the examinations made were not very minute or frequent.

The first symptom noticed was a turning in of the left eye in April, 1895; and with this a drawing of the face to the right side, due, as could be seen on admission, to paralysis of the left side of face. In the course of the next month (May, 1895) the child became weak in the legs, and the right toes were turned in front of the left in walking, and she frequently fell to the right side. The right hand was also weak. There was thus a clear history of "crossed paralysis," which was confirmed on examination on admission.

For the eye affection, blisters had been applied by medical advice, and the mother ascribed the subsequent bad symptoms to this cause. This, although no doubt quite erroneous, serves to fix the dates. Vomiting occurred, although only on two days; the left ear began to discharge matter; the child ceased to be able to walk; and she became thin. At this time and up till admission, in January, 1896, the child took things with her left hand by preference; but the right hand was not quite powerless.

Failure in the speech began gradually, with the development of the bad symptoms named above; but even on admission she made an attempt to speak to her mother, but the sound was extremely indistinct and only occurred once or twice in first few days. The tongue apparently could not be protruded. The intelligence of the child was not lost; although she appeared dull and rather apathetic, she seemed to understand. No definite account of headache could be obtained; she was said by her mother to have cried at times, as if in pain; but the purulent disease in the ear, which underwent exacerbations, may have accounted for some of these attacks of pain.

Urine and fæces were passed without any sign or notice after admission; but the mother stated that up till then she had usually given notice.

The left eyeball was found to be turned in and staring, from paralysis of the left external rectus and of the facial muscles on left side; the sensation seemed to be preserved in the left cheek, certainly for pain. The left pupil was small, but dilated on shading and also with atropine, but not so

much as the right did. On 17th January, without exposure to a bright light, the right pupil measured 61 mm. and the left 31 to 4 mm. A small ulcer was found on the outer margin of left cornea. Soon after admission, it was found that the right eyeball had its outward movement impaired, as it could not be taken beyond the middle line. Ophthalmoscopic examination of the left eye could not be made owing to the extreme deviation inwards; in right eye, the disc was found swollen on admission, with some obscuration of the fundus, and in two months there was some atrophy made out. Vision could be proved to exist in both eyes, even in the left; if a suitable position was chosen, the child could grasp an object from seeing it with this eye. By the middle of March the corneal ulceration in the left became worse, the cornea became infiltrated, iris muddy, and pus was seen in the anterior chamber, and the eye soon began to discharge, so that firm bandaging was practised to prevent protrusion. In the child's weak state this bandage caused a little sore on the brow, and it had to be slackened.

The facial muscles on the left side were found to respond to the faradic current; and this fact, along with the paralytic symptoms in left eye, negatived the notion of the facial paralysis being due to middle ear disease, although this was

found to exist on that side.

Swallowing was not impaired on admission, when she could drink out of a mug. By the beginning of February, however, she could take no solid food, and even liquids had to be put far back into the mouth. Curious convulsive turns, with general rigidity, came on at times when being fed, and by the end of March regurgitation of fluids through the nose sometimes took place.

The general attitude was chiefly in a semiprone position towards the right, but she could sit up if supported by pillows.

The head and neck showed nothing special.

The lower limbs on admission presented slight talipes equino-varus on the right side, as already stated, with a little rigidity. When helped in walking, soon after admission, she was found to carry the right leg in front of the left, like a hemiplegic; to a less extent, the left was carried in a similar way. A prick of a pin evidently caused pain in both legs. The knee-jerk was exaggerated on the right side, and tapping the patella caused the toes to move. Latterly the knee-jerk on left side was also exaggerated. No ankle-clonus was made out in the case till a few days before death, when it was found to be easily obtained in both sides.

The upper limbs were usually kept flexed at elbows. At first she used her left hand very well, the right being partially paralysed, and colder and bluer than the left, and a little rigidity existed in the right arm. As the case advanced, the left arm became involved, and she ceased to take objects with it; indeed, she used the right by preference, whereas at first it was the opposite way.

The temperature showed some elevations about the end of March, reaching 101° F., sometimes 102° F. in the rectum. On 19th April it ran up to 106° F., and continued high, but not so excessive, till death on 24th April. With the high temperature (106° F.) unconsciousness supervened, and con-

tinued till death on 24th April.

The post-mortem examination was made by Dr. Sutherland, the pathologist to the hospital.

The lungs showed recent scattered tubercles, with a small cavity (14 nm.) in left. Bronchial glands were caseous.

In the abdomen the mesenteric glands were somewhat

prominent, but the organs there were otherwise normal.

Cranium.—There was slight flattening of the convolutions of the convexity of the brain. About two ounces of clear fluid escaped on removing the brain. There was a somewhat tough exudation at the base, particularly at the optic chiasma. This could be traced into the Sylvian fissures, especially the right, on to the anterior aspect of the upper part of the cerebellum and along the choroid plexus into the fourth On the internal aspect of the right hemisphere ventricle. two tolerably firm opaque yellow nodules were visible. The larger of these was situated in the convolution of the corpus callosum, directly involving the corpus callosum itself at its lower part. It measured 1 cm. in diameter. Posterior to this. 1.5 cm. anterior to the parieto-occipital fissure and 1 cm. from the upper surface of the hemisphere, was a smaller but otherwise similar mass. A third nodule was found in the right ascending parietal convolution, 3.5 cm. from the upper surface of the hemisphere. The lateral ventricles and the third ventricle were dilated. There was no softening of their walls. The pons, as a whole, appeared enlarged, being most prominent on its ventral aspect on the right side, and on palpation here a sensation of resistance was conveyed. pons with cerebellum was hardened in Müller's fluid before being cut into.

After hardening, the pons was bisected mesially, and two secondary incisions made in each half. A large caseous mass at once came into view in each half, measuring on the mesial

surface 3.5 cm. antero-posteriorly, and 2.3 cm. dorso-ventrally,

and was found to occupy the greater part of the pons.

The tumour was found to reach the floor of the fourth ventricle and aqueduct of Sylvius at parts, at others it was separated by a thin rind of positive tissue not exceeding 2 mm. in thickness at any part; ventrally it was limited by the pyramidal fibres of the pons, which stained well by the Weigert method, and formed a band of 1 cm. in thickness.

The anterior of cephalic limit of the mass is about a line immediately behind the second posterior corpora quadrigeminus, and the caudal limit is immediately above the

superior end of the inferior olive of the medulla.



Longitudinal section through pons and cerebellum showing the position of tumour in pons.

Laterally the growth extends to about the same extent on both sides of the pons, just touching the cerebellar peduncles, but separated by a zone of nervous tissue about 1 mm. in thickness.

Microscopically the appearances of all the masses, those in hemisphere and pons, are those of a scrofulous tumour.

The spinal cord was examined, but presented nothing remarkable on naked-eye inspection.

The microscopic examination of the medulla and cord at various levels, after staining according to both the Weigert and Pal methods, gave no evidence of degeneration.

The left ear was also examined. The cavity of the tympanum was filled with a thick, somewhat gritty, yellow

material. The petrous bone at parts was bare. There was no evidence of extension from the bone to the membranes.

Dr. John Love gave an account of the microscopic anatomy of the tumour, and said that he did not find any trace of

degeneration of the pyramidal tracts in the spinal cord.

Dr. Alex. Robertson said the material points in the case had been well brought out; at the same time, the diagnosis was perfectly obvious from the grouping of the symptoms. He asked how Dr. Finlayson differentiated between a lesion of the facial nerve in the middle ear and a lesion in any other part of the nerve.

Dr. Finlayson, in replying, said that in his experience of facial paralysis due to middle ear disease faradic response is always lost. In nuclear paralysis faradic response is sometimes lost too, but in tumour of the brain, apart from localisation in nuclei, there is paralysis of the face without lessening of faradic reaction. He thought this case would be of interest to the members, as he mentioned it once before as a very obvious case of tumour of the pons.

# III .- PARALYSIS OF THE SERRATUS MAGNUS.

#### By Dr. Donald Fraser.

M. L., female, æt. 18, millworker. This patient complains of loss of power in the right shoulder. At her work, which she has been compelled to leave off, she found a forward pushing movement of the right arm, which she frequently required to make in doing her work, getting more and more difficult, so that after six months of this condition she came into the Infirmary for treatment on the 11th September, 1896. On examination it is found that she cannot raise her arm above the level of the shoulder, and cannot push forcibly with her extended right arm. There are well-marked indications of paralysis of the right serratus magnus, and to a slight extent of the upper part of right trapezius. The symptoms are very striking and of the usual character. When the arm is extended in act of pushing she leans towards right side, and the right scapula is removed from chest wall fully 2 in. along its spinal border. There is also marked rotation of the lower angle of scapula when the arm is advanced. This condition was preceded by neuralgic pains about head and neck. There was no history of injury or of any antecedent illness.

The treatment is by massage and the daily use of the

faradic current.

#### IV .- CEREBELLAR ATROPHY.

#### By Dr. Donald Fraser.

Dr. Fraser showed a case of atrophy of the cerebellum, and compared at some length the symptoms with those of disseminated sclerosis and Friedrich's disease. (See paper in Glasgow Medical Journal, December, 1895.)

#### V .- CASE OF HYSTERIA.

#### By Dr. Donald Fraser.

Dr. Fraser showed a patient, a young girl, the subject of hysteria, who had been admitted into the Paisley Infirmary on the 14th September, 1896, as suffering from fits, presumed to be epileptic, but which were soon determined to be hysterical. She said she had suffered from fits for a year. Fits occurred almost daily for a week or two after admission. Each fit lasted from five to seven minutes, and was attended by unconsciousness. During the fit patient rolled on her left There was general bodily and facial twitching, but marked clonic spasms of the arms and legs, particularly on the right side. The pupils were semi-dilated; conjunctival reflex was present. Evelids were closed, and attempts to open them were resisted. Face was flushed. control of sphincters. No result of any kind from pressure over ovarian regions. She generally slept after a fit. Dr. Fraser on one occasion found this patient in a fit. She was lying on her left side in bed, her hands drumming on the bed as the result of clonic spasms of the arms, and the right leg actively moving as the result of similar spasms. The face, pupils, and general condition were as above described. To anyone familiar with the epileptic fit there could be no doubt that her fits were not truly epileptic, though epileptoid in character. It was difficult to ascertain whether there was any aura or prodrome, and while there were none of the motor or emotional displays usually associated with the hystero-epileptic fit, stigmata were, however, present in a marked degree during the inter-paroxysmal period. After a certain amount of variability analgesia of the whole right side (face, limbs, trunks, mucous membranes, conjunctiva), became established between 20th and 24th September. this side painful stimuli were interpreted as mere contact. Left side normal. Temperature sense was lost over most of right side, heat and cold being interpreted as contact.

On right side of face and right leg heat and cold were feebly appreciated. Left side normal. The superficial and deep reflexes were generally absent on the right side and present on the left. The knee-jerks were exaggerated on both sides, and there was a very marked rectus clonus in both legs.

The field of vision was contracted on right side. From the 4th till 8th October there were no fits, with the result that pain and temperature sensations were beginning to be

appreciated over right side.

On the 8th October she took a fit which lasted fifteen minutes, followed by a return of all the sensory abnormalities referred to above. This variability, and occasionally a patchy distribution of the hemi-anæsthetic areas, have been repeatedly observed as being related to the absence of fits for some days.

There is a persistent contracture of the right hand, the fingers being flexed at the proximal phalanges. During sleep the nurse can overcome this contracture without wakening the patient. Occasionally there is ptosis of right upper eyelid.

Dr. Fraser next referred to the views of Jannet and others

as to the nature of hysteria.

## VI.- A CASE OF PROBABLE CEREBRAL ANEURYSM.

By Dr. ALEX. ROBERTSON.

H. M., set. 23, labourer, was admitted to the Glasgow Royal Infirmary on 7th September, 1896. Patient had been told that he had water in the head when young; no hereditary tendency to any disease; no syphilis, rheumatism, or cardiac disease; habits correct. Throbbing in head, since July, 1895, constant; worst at night. Since middle of August, pain in vertex of head and occasional pain in ears.

12th October, 1896.—Arteries tortuous, large, and firmer than normal. This is appreciable in temporal as well as in radial and posterior tibial at ankle. Heart sounds normal.

Throbbing has continued since admission. Still dull pain in vertex. Throbbing is particularly felt on left side, but extends from ear to ear. No murmur on auscultation of head; pulsatory sound faintly heard. No cranial nerve symptoms, except some defect in hearing, which has passed away. Has always been myopic. Fundus of eyes normal. Arms are strong. Has had weakness in walking since he was a child. Lately the right foot has turned slightly inwards, and left more so, though neither much. Feet small; arch exaggerated. Contraction of extensor tendons at metacarpo-phalangeal joints with flexion beyond, especially on left side. Is knock-kneed.

Sensation is correct, except for dull pain in calves, increased on pressure. Reflexes normal. Bladder and bowels correct.

Treatment.—Iodide, increased to 30 grs. three times a day.

Gets 5 grs. grey powder morning and evening.

Dr. Wood Smith said the patient complained of noises in the ears, the left being the worse. He thought the administration of ergot might do good.

Dr. J. Kerr Love said he had carefully examined the patient's arteries, and he did not think their condition in any

way abnormal.

Dr. Robertson said all the members had felt the patient's blood-vessels, and they were certainly abnormal for a man of 23.

Dr. Rutherfurd said the patient had come under his observation complaining of feebleness of the legs, and there was a certain amount of deformity of the feet, which approached a condition of pes equinus. There was also considerable emaciation. On account of his complaint and condition it was considered proper to place him under medical supervision.

## OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Session 1896-97.

MEETING I.—28TH OCTOBER, 1896.

The President, Dr. G. A. TURNER, in the Chair.

THE PRESIDENT, in his retiring remarks, gave further information with regard to the plague of St. Kilda, on which he had already made a communication to the Society, and he then referred to some points of interest in the past history of the Society.

DR. ARTHUR MECHAN read notes of a very unusual complication of labour due to bilateral cystic kidney. After delivery of the head and shoulders without difficulty there was considerable delay, which, on examination under chloroform, he found was due to the size of the abdomen; and, as considerable traction failed to move it, he eviscerated. Both kidneys were greatly enlarged, and consisted of a mass of small cysts, the right weighing 14½ oz. and the left 16¾ oz. The patient made a good recovery.

MEETING II.—25TH NOVEMBER, 1896.

The President, Dr. MALCOLM BLACK, in the Chair.

I.—FRESH SPECIMENS, ETC.
By Prof. Murdoch Cameron.

Prof. Murdoch Cameron showed (1) two dermoid tumours of the ovaries removed from a patient who had had a child only five months previous to the operation. One of them was of a deep livid colour, which was found to be due to two turns on the pedicle. Two wax casts of the tumours which he had made were exhibited to show the different appearances of the two tumours in the fresh condition. (2) A small tumour removed from the labium majus. (3) Ovaries from a case of myoma of the uterus in which there had been severe hæmorrhage.

# II.—" THE VALUE OF CACHEXIA IN THE DIAGNOSIS OF MALIGNANT DISEASE."

BY DR. G. T. BEATSON.

After an interesting introductory reference to the study of physiognomy and diathesis in relation to diagnosis, and to the work of Laycock and Jonathan Hutchinson in this connection. Dr. Beatson said that the question he wished to bring specially under the notice of the Society that evening was whether or not cancer carried with it such an alteration in the patient's appearance that it might be relied on as much as, for example, the bronzing of the skin in Addison's disease, in forming an opinion as to the nature of a tumour, in other words, whether it was a reliable factor in diagnosis. He then gave in detail the history of a patient who had been recently under his treatment, and whose case was a good illustration of his She was 41 years of age, and her family history showed that her grandfather and a paternal uncle had died of cancer, while her mother had been operated upon for some nterine trouble. She had herself been at different times under treatment of several gynæcologists, with little or no permanent benefit, till in 1892 the cervix uteri was amputated for cancer. Her health was better for a time after this, but a year or so later "floodings" began, and had since continued at every period, accompanied by severe pain. In the intervals there

was a brownish vaginal discharge. She now began to lose flesh. She was advised to enter the Western Infirmary, where she was admitted last February, and was under the care of Prof. Murdoch Cameron. She was dismissed in eleven days. Three months later, when she came under Dr. Beatson's charge in the Cancer Hospital, she had a sallow, anxious, cachectic appearance. There was an abdominal tumour reaching to within an inch or two of the umbilicus. There was no deposit near the cervix nor appearance of ulceration. She was afterwards carefully examined under an anæsthetic. The uterine cavity at that time measured 33 inches. Enquiries were now made as to the nature of the disease for which the cervix had been amputated, and it was found to be malignant disease limited to the cervix, and Prof. Cameron believed that it had recurred, and his opinion was evidently based on the cachectic appearance and rapid wasting of the patient. Dr. Beatson at this point discussed the various opinions as to the relations of cachexia to carcinoma. After referring to the widespread belief that cancer, as it extended, had an injurious influence on the tissues, and set up constitutional symptoms indicated by rapid emaciation, anæmia, loss of strength, and especially by a peculiar lemon-coloured tint of the skin, which by some was considered pathognomonic and a sign that successful removal could not be hoped for, he said that he did not believe in any such special cancerous cachexia. Such appearances were due to ulceration of the growths and absorption of the products or to repeated hæmorrhages. He referred to two cases he had treated in illustration of this view. was a case of cancer of the stomach which never ulcerated, and the patient ultimately died of inanition without developing the cachectic appearance. The other was a case of cancerous "cauliflower" growth from the cervix uteri, too far advanced for radical treatment, and yet, when he removed the ulcerating masses and used antiseptic douches, the markedly cachectic appearance soon disappeared, and the patient for the time improved in condition. Dr. Beatson then quoted from Bryant and Matthews Duncan on the subject of cachexia. In the case he had related in detail, after watching and studying the patient for a time, he decided to make an exploratory abdominal incision, as there was no recurrence at the site of the operation and no glandular infection, while the discharge was intermittent and not particularly feetid, and showed no débris in it, and the abdominal tumour was smooth and globular. These characteristics seemed to suggest uterine fibroid, and he found on making the incision that the uterine enlargement was

myomatous, and he accordingly removed the two ovaries, both of them cystic. The abdominal tumour soon disappeared, the vaginal discharge ceased, and the patient made a good recovery, gradually gaining flesh and getting back her healthy appearance. Dr. Beatson then remarked that if the view he was disposed to take of the etiology of cancer were correct, the removal of the tubes and ovaries should be materially in her favour on that ground.

Dr. Beatson concluded by referring to the question of the exploratory abdominal incision, and pointed out the advantage of it in such cases where the doubt as to their nature and treatment could not be removed by the usual methods of diagnosis.

Prof. Murdoch Cameron said he did not understand how the removal of the tubes and ovaries could lead to so rapid a disappearance of so large a tumour as that described. The explanation of cachexia as being due to septic poisoning was the true one. In the case referred to by Dr. Beatson, it was not from the cachexia alone that the diagnosis was arrived at, and they did not diagnose it as cancerous, but as presumably cancerous. With regard to recurrence, it was not necessary that cancer should recur on the cicatrix; in fact, pathologists had pointed out that it was more apt to creep round the cicatrix. He had seen such cases. The swelling on the right side, too, was painful, and a fibroid was not usually painful to the touch.

Dr. Stuart Nairne said they were all at one in not regarding cachexia as pathognomonic of cancer. Similar cases had occurred in his experience, and he quoted the case of a patient who, after being in the Cancer Hospital, was admitted into the Samaritan Hospital showing a typical cachexia and having a foul discharge, and they had removed there a sloughing fibroid. He also could not understand so rapid a disappearance of a tumour described as reaching nearly to the umbilicus after removal of the ovaries. It was more likely to be a case of senile endometritis. As to the exploratory incision, he still held that it should not be done simply for the purpose of diagnosis. It should be possible without that to make a sufficiently certain diagnosis, so that the surgeon might lay his plans for treatment, and any incision made after that should rather be called confirmatory.

Dr. Samuel Sloan said that many cancerous patients looked well even if they had been pretty long ill, but advanced cases seemed to him to have a cachexia. He referred also to the

unusually rapid decrease in size of the uterus, and wondered if there was any mobility of the parts. If there was mobility he would justify abdominal incision.

Dr. Sturk said he believed that cachexia did not depend on

the disease, but on the exhausting discharges.

Dr. Beatson, in reply, said that the tumour was dense and firm to the touch, and had all the characteristics of a fibroid. It was not unusual for him to remove the tubes and ovaries in such cases, and to have a quick diminution in size of the tumour as the result.

## GLASGOW SOUTHERN MEDICAL SOCIETY.

Session 1896-97.

MEETING V.—26TH NOVEMBER, 1896.

The President, Dr. J. STUART NAIRNE, in the Chair.

DEMONSTRATION IN THE VICTORIA INFIRMARY OF SURGICAL DISEASES OF THE NERVOUS SYSTEM.

#### By Dr. R. H. PARRY.

1. Removal of Blood-Clot from surface of Temporo-Sphenoidal Lobe.—Patient was admitted to hospital, after a fall on the back of the head, with slight facial paralysis, right drop-wrist, and aphasia. Slight twitchings of the right side of the body had been observed after the accident. Some years ago patient had puerperal eclampsia, and on admission the urine contained albumen. The symptoms indicating a cortical lesion, a disc of bone was removed over the left temporosphenoidal lobe, and a large blood-clot containing some brain matter turned out. The patient, who was present, made a perfect recovery.

2. Reference was made to a case of Cyst on the Brain, with aphasia and wrist-drop, in which rapid improvement followed trephining and draining of the cyst. Subsequently, however,

patient relapsed.

3. To contrast with those extra-cerebral lesions, photographs were shown from a case where the lesion was in the substance of the right frontal lobe. In this case the symptoms were left-sided paralysis with general rigidity, the muscles of the shoulder being more affected than those of the hand.

4. Case of Spinal Caries with extradural abscess causing paraplegia.—Two years ago an operation was performed to relieve pressure on the cord. Some time later this was followed by resection of head of rib and of transverse process, drilling of lateral aspect of body of vertebra, and evacuation of abscess in mediastinum. The parts healed perfectly. The patient, who was present, has improved considerably since the operation.

5. Reference was made to a case shown to the Society four years ago, in which laminectomy had been performed for paraplegia due to caries, and in which recovery was complete

two years after the operation.

6. A specimen was exhibited showing the condition of the parts after laminectomy and trephining for removal of a mediastinal abscess. Healing was perfect. The patient had regained full control over limb, but died some months after the operation from meningitis.

7. Reference was made to the localisation of lesions in the spinal canal, and to the definite sequence in which symptoms due to extradural lesions appear. The subject was further

illustrated by diagrams.

8. A patient was introduced who had been operated on for Spasmodic Wry-neck. Little improvement having followed division of the right spinal accessory nerve, it was evident that the deformity was maintained by the action of the posterior group of muscles on the opposite side of the head. These were freely massaged, rotatory movements of the head were practised, and galvanism was employed, with the result that the patient made a perfect recovery. He had been treated for nearly a year in other hospitals without benefit.

9. Reference was made to another case, treated by division of the right spinal accessory nerve and of the posterior roots of the four upper left spinal nerves, in which for a time improvement was remarkable, but in which the spasms super-

vened in the right posterior group of muscles

10. Case of Extensive Injury to Shoulder and Ribs of Right Side, with fracture of clavicle and upper three ribs, compression of subclavian artery, laceration of brachial plexus, emphysema, and collapse of lung. Slow recovery took place, and patient had a fairly useful arm; but for many months he suffered such severe pain in the arm that amputation was advised by two other surgeons. It has since spontaneously disappeared.

11. Recovery of Sensation after Resection of Nerves.—The patient, who was present, was admitted for tubercular disease

A preliminary attempt was made to save the of the tarsus. foot by gouging, &c. In spite of long rest and residence in the country, the disease continued to spread, and amputation seemed inevitable, there being also well-marked tubercular The following operation was performed:-Two transverse incisions were made across dorsum of foot, one over neck of astragalus and the other across base of metatarsal bones. All the intervening structures—skin, tendons, vessels, nerves, bones—down to deep muscles of sole, were removed; pockets and sinuses in sole of foot were scraped. The resulting wound was loosely packed with gauze (no sutures being used), and the foot placed in a splint. Subsequent treatment consisted of steeping the foot two hours daily in a weak antiseptic bath, till the bones were covered with granulations, when the partitives approximated and kept in contact by a posterior splint. Healing has been so complete, and the result so satisfactory, that it is impossible

All the nerves on the dorsum of the foot canterior crural and musculo-cutaneous were divided; yet in twenty-four hours after operation sensation on the distal side of the wound seemed quite normal. This can only be accounted for

by anastomosis of nerves.

12. Reference was made to another case of extensive injury in the region of the elbow involving rupture of brachial artery, muscles in front of elbow, and musculo-spinal nerve. Incisions were made to relieve tension. In the sloughing which took place, about 2 in. of the musculo-spinal nerve were destroyed. Some three months later, patient was able to readily appreciate gentle pressure over the area supplied by the radial nerve. Here too we must fall back on

anastomosis for an explanation.

13. Three Cases of Empyema of the Frontal Sinus.—The main features of the first case were necrosis of the posterior wall of the sinus, a large subdural abscess, and empyema of of maxillary antrum of same side; complete recovery. In the second case perforation had taken place into the orbit, with formation of abscess there. The third case was seen early, and after the sinus was thoroughly cleared out the parts were closed. The case was watched with considerable interest as, on the advice of Dr. A. Brown Kelly, no drainage was employed either to the surface or to the nose. The patient made an excellent recovery.

## GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1896-97.

MEETING I.—11TH NOVEMBER, 1896.

The President, Dr. ALEX. PATTERSON, in the Chair.

Dr. Patterson took as subject for his Presidential Address

the notes of two cases of surgical interest.

The first case was that of a man severely crushed about lower part of both legs owing to a furnace of a ton weight falling upon them. From the extent and degree of the crush gangrene to some extent was predicted; and this took place, but was kept within bounds by regular dressing and the internal administration of opium. Dr. Patterson laid great stress on the use of opium in such acute gangrenous conditions, as also in phagedænic ulceration of other parts. He gave it as his experience that in any cases where opium failed nothing else succeeded. The application of caustics he declared bad.

The second case was that of a patient suffering from sarcoma of the scapula, who was operated upon, the whole upper limb, including the scapula and acromial end of clavicle, being

removed. The tumour weighed 24 oz.

DR. DUNLOP (Duke Street) afterwards showed a lad on whom dermography could be displayed. Scoring the skin with a pencil caused bright red lines to appear, followed by effusion, forming wheals.

### REVIEWS.

A Manual of Infectious Diseases. By E. W. Goodall, M.D. Lond., and J. W. Washbourn, M.D. Lond. London: H. K. Lewis. 1896.

THE authors have produced a work of great value to general practitioners and students of medicine. It is based on wide and varied experience of the specific fevers, with special relation to their diagnosis and treatment. A comparison of this with older books on the subject discloses a real advance

in our knowledge, the advance being more particularly in the

domain of pathological chemistry and bacteriology.

The first forty-eight pages deal with fever, contagion and infection, and disinfection. The first and the last are well and adequately treated, but the terms contagion and infection remain as fluid as ever in their meaning, the authors, indeed, being of the opinion that the distinction between the two should be given up altogether; but there is certainly a wiser course, too little adopted in British medicine—viz., to express the ideas underlying these two terms in plain English words of simple and unequivocal meaning.

A useful chapter is devoted to drug rashes simulating those of the specific fevers, and another chapter deals with forms of sore throat and their differentiation from the sore throats of some of the specific fevers. This chapter is not entirely satisfactory from an etiological point of view. Follicular tonsillitis is here separated from diphtheria, but the writer on infectious disease in Allbutt's System of Medicine thinks these should be regarded with grave suspicion from the point of

view of diphtheria.

The rest of the book, comprising 294 pages, is devoted to an account of the specific fevers, including mumps, influenza, typhus, relapsing fever, and anthrax, and in this larger section of the work the special excellence of the authors' treatment is fully shown in their careful and full presentation of the symptoms of each affection, in the enumeration of individual variations from the "morbid mean" of each specific fever, and in their full account of the complications and sequelæ of the different diseases, and their altogether admirable differential diagnosis.

The bacteriological relations of each disease are pointed out, several plates are given representing the forms of different bacteria, and much useful information is furnished of the behaviour of bacteria on different culture media and for their preparation for microscopic examination. Several diagrams represent in graphic manner the appearance of the rashes in the respective fevers, and many useful temperature charts are

scattered throughout the book.

The book winds up with four appendices on staining solutions; the regulations of the Metropolitan Asylums' Board on removal of infectious cases of disease; a table showing incubation periods, day of eruption, &c.; the antitoxine treatment of diphtheria; and a fairly adequate index.

We have tested this work freely in dealing with the more or less obscure forms of infectious disease, and have found it invaluable, and have no hesitation in recommending it to the favourable notice of all members of the profession. The authors deserve high praise for their book, and they may rest assured that its careful perusal will remedy much of the faulty diagnosis of the specific fevers at the present day.

Two Years of Anti-Choleraic Inoculation in Calcutta. By W. J. SIMPSON, M.D., M.R.C.P., D.P.H., Health Officer, Calcutta, 8th July, 1895.

Brigade-Surgeon Lieut.-Colonel Sanders' Criticism on the Cholera Inoculation of Calcuttu and Serampur, and Dr. Simpson's Reply, 24th August, 1896.

THE name of Dr. W. J. Simpson is one not only of Indian but European fame. The good work of much needed sanitary reform which he is carrying out in Calcutta is well known and heartily acknowledged. Calcutta is the capital of Bengal, and Bengal is the "home of cholera." Thus, in a sanitary sense, Dr. Simpson's work is of world-wide influence and importance.

It would be out of place here to describe the various steps which have been taken to subdue cholera in Calcutta. The filling up of the notorious "water tanks" and the introduction of another water supply conveys a great deal to the minds of those who are acquainted with life in India. The tracing of the outbreak of cholera on board the Ardenclutha to milk

cannot be forgotten.

But another, and a very promising measure, has been adopted in the form of anti-choleraic inoculations, and it is to this later development that our attention must be confined.

In his report on "Two Years of Anti-Choleraic Inoculations in Calcutta," Dr. Simpson gives a clear, painstaking, and most interesting account of the results of this method of protection against the dread disease. He does not omit to give M. Haffkim due acknowledgment. Let Dr. Simpson speak for himself:—

"The number of people inoculated during the period under review was 7,690; of these 5,853 are Hindus, 1,476 Mahomedans, and 361 other classes. The 7,690 inoculations were carried out chiefly by one medical man who, at the same time, has to perform other duties, such as registering the inoculations, investigating cases, and explaining to the people the object of the inoculations. Considering that the system is a new one,

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that the inoculations are purely voluntary, and everything connected with them has to be explained before the confidence of the people can be obtained, and considering how long new ideas are in taking root among the general population, and in this case it is not merely the acceptance of an idea, but such faith in it as to consent to submit to an operation, the number

is certainly satisfactory for a beginning.

"The present problem can be compared with the introduction of vaccination against small-pox into Calcutta. took twenty-five years before the number of vaccinations reached an average of 2,000; whereas the inoculations against cholera have in two years nearly doubled that average.". . . "There is a certain discomfort produced by the inoculations. such as an attack of fever lasting about twenty-four hours, pain at the seat of inoculation on moving, thus interfering with heavy physical work for about thirty-six hours. The discomfort is not, however, worse than that induced by vaccination when the vesicles have risen well, and it has the advantage of not lasting nearly so long. The method of inoculation has been recently simplified by dispensing with the first vaccine, the second now being used directly in smaller This increases slightly the degree of discomfort, but does away with the necessity of undergoing two inoculations. As in vaccination, the symptoms after inoculation, i.e., the degree and duration of the fever and local effect, vary according to the idiosyncracy or peculiarity of constitution of the inoculated person; but it is necessary to prominently bring to notice that all sorts and conditions of individuals, weak and strong, sickly and healthy, young and old, well nourished and badly nourished, and often persons suffering from chronic diseases have been inoculated, in every instance without exception, the inoculations have proved perfectly harmless. In several instances, like that lately in Serampur, reports have been spread that injury has followed the inoculations. On investigation it has been proved by the official medical and civil authorities that these reports were absolutely untrue."

As to the results:—"The investigations on the effect of the inoculations are made exclusively in those houses in which cholera has actually occurred, the object being to ascertain and compare the incidence of cholera on the inoculated and not inoculated in those houses in which inoculations have been previously carried out." . . .

"Without excluding the occurrences of cholera in the inoculated during the four days necessary for treatment, and considering the results for the whole period of time, from the

first day of the operations in Calcutta up to the end of last month, the results are as follows:—

"654 uninoculated individuals had 71 deaths (10.86 per cent), while 402 inoculated in the same households had 12 deaths (2.99 per cent). This shows that notwithstanding the incomplete protective effect of the first four days, and the gradual disappearance of the resistance in those inoculated with weak doses of weak vaccines, which a large number of the inoculated people have received, the mortality amongst the inoculated, compared with that of the uninoculated, was in the proportion of 1 to 3.63, giving a reduction of mortality of 72.47 per cent; or, in other words, in houses where inoculations were performed, and which were subsequently visited by cholera, there occurred for every 11 deaths amongst the uninoculated 3 deaths amongst a similar number of inoculated.

"The results of Calcutta are fully confirmed by those obtained in other parts of India wherever it was possible to make all the necessary observations with precision, and wherever the cases were sufficiently numerous to show the effect of the inoculation."

These extracts must suffice for the statement of Dr. Simpson's case.

Brigade-Surgeon Lieut.-Colonel R. C. Sanders, in a speech delivered at the municipal meeting, opposed the grant for the inoculations on the ground that he did not think any good could come from them. He undertook a private investigation, and (through a third person) an educated Brahmin was sent round to spy out the land and report.

"The first thing he discovered was that three persons had been sent round to all these people, telling them to say nothing unfavourable." Dr. Sanders then went through Dr. Simpson's report, trying to pick holes, and making statements contradictory to those of Dr. Simpson. Lastly, he asserted that the experiments were dangerous. He thus concludes his speech:—

"Lastly, sir, there is the guinea-pig point of view. I do not know what purpose in the creation the guinea-pig was intended to fill; but this I do know. He was not created that he might suffer a horribly loathsome, painful, lingering, and absolutely useless death, at the hands of the Municipal Commissioners of Calcutta."

In his "Reply" Dr. Simpson demolishes Dr. Sanders' "Criticism" in the most satisfactory manner; and, being justly indignant at the "private enquiry" and the insinuations of his opponent, demands the appointment of an independent Commission to investigate the results of anti-choleraic inocula-

tions. Dr. Simpson is to be sympathised with in his noble labours devoted to the saving of his *fellowmen* from "a horribly loathsome, painful death," especially when those labours are hampered with such unreasonable opposition as that of Dr. Sanders.

Years ago the writer was personally conducted by Dr. Simpson over some of the slums of Calcutta (Jora-Bagan and Burra-Bazaar), and he has a vivid recollection of the horrors with which the health officer had to contend in the stifling and depressing city on the Hugli. Let us hope that his hands will be strengthened, and that he may be spared to see the fruits of his labour.

Micro-Organisms and Disease: an Introduction to the Study of Specific Micro-Organisms. By E. Klein, M.D., F.R.S. New Edition. London: Macmillan & Co., Limited. 1896.

Nothing could show better the progress that the science of bacteriology has made during the last ten years than a comparison of the 1885 edition of this work with the present edition. For example, in 1885 the author required five pages to describe the vibrio of Asiatic cholera, whereas in the present work forty pages are devoted to a description of this germ; the Klebs-Löffler bacillus of diphtheria (first discovered and described in 1884) is not mentioned in the 1885 edition, whereas its description occupies twenty-eight pages of the present. Other examples might be quoted to show that the author, in order to bring his work up to date, has had virtually to rewrite his book.

The work naturally divides itself into two parts—a description (1) of the different methods of bacteriological investigation, and (2) of the different pathogenic and the most common non-pathogenic organisms. Special chapters are devoted to the discussion of the antagonism amongst bacteria, and the relation

between the saprophytic and the pathogenic germs.

In the first five chapters, the use of the microscope, the methods of staining, the preparation of the different culture media, the vessels and instruments used, the methods of inoculation, &c., are fully and clearly described. In fact, so perfect is this part of the work in other respects that one is surprised to find that in the section devoted to a description of special methods for the detection of special microbes, such methods as Abba's and Elsner's are not even mentioned. Again, to demonstrate flagella, Van Ermengem's method is the only one given. Excellent as this method is, one would

have expected that Löffler's method, and the more recently described method of Pitfield, would have been stated. True, Löffler's method is mentioned, but neither the steps of the process as described by Löffler, nor Nicolle and Morax's modification of the same, have been indicated.

After describing the general characters and chemistry of bacteria, the author goes on to describe the different microbes under the simple classification of cocci, bacilli, and vibrios. The bacilli he subdivides into non-specific and pathogenic, and The aerobic pathogenic bacilli are into aërobic and anaërobic. further subdivided into four groups—(a) Short oval rods which do not liquefy gelatine, and do not form spores; (b) bacilli resembling bacillus coli, and capable of producing acute infection and death to the animal body; (c) fine cylindrical rods slowly liquefying the gelatine and not forming spores; and (d) those which cannot be classified under (a), (b), or (c). While the writer prefers the simple division into two classes those which liquefy, and those which do not liquefy gelatine -subdivided into those which stain, and those which are decolourised by Gram's method, still the grouping, as indicated above, will answer well for teaching purposes. For the sake of comparison, it might have been better if bacillus coli had been described under group (b), instead of among the nonspecific germs. True, it is normally non-specific, but authorities are equally agreed that it sometimes assumes a high degree of virulence. Moreover, it is probable that a few of the organisms described in this group were virulent varieties of bacillus coli. The writer has himself isolated from meat of a steak pie which had caused acute gastro-enteritis to each member of a large family, bacilli which in every respect were identical with the colon bacillus, except that it was evidently more virulent than the normal. What the author has written concerning the vibrio of cholera may, with equal force, apply to the bacillus coli, the bacillus typhosus, and others, viz., that bacilli "living afterwards under abnormal conditions of temperature, soil, and others, for considerable periods, could so alter as to change some of their original cultural characters, as also their physiological reactions." Apart from classification, however, the different micro-organisms are each minutely described, and the particulars in each case are thoroughly up to date. sidering its value for purposes of differential diagnosis, the author should (at least in the case of the pathogenic germs) have stated whether or not the germ could be stained by Gram's method, but, excepting this omission, very little fault can be found with this part of the work. Perhaps, occasionally, the author is somewhat too critically digressive for a text-book meant for students, but altogether the book is one that can be highly recommended. It is rich in references, is well printed, and contains over 200 beautiful illustrations, mostly taken from photograms. In short, it is, we think, one of the best text-books on bacteriology, yet published in England.

Disease and Defective House Sanitation. By W. H. CORFIELD, M.A., M.D. Oxon., &c. London: H. K. Lewis, 1896.

EVERYTHING which emanates from the pen of Prof. Corfield on sanitation is deserving of the most careful reading by all interested in the public health. This small brochure contains the substance of two lectures which were delivered before the Harveian Society of London, and it deals with those defects in house sanitation which are not uncommonly found by the expert, and are relics of the time when such matters were less well understood than they are to-day. The author indicates wherein such defects in sanitary fittings menace the health, and shows how far-reaching may be their effects. He also very properly calls attention to the injury to health produced by leaky gas-fittings in the house—a subject to which, hitherto, too little attention has been paid. That coal-gas in small percentage quantities in a house atmosphere are inimical to good health cannot be doubted, and while its effect is probably not very lethal, it, at the same time, renders those exposed to its influence more vulnerable to attack from infective and other diseases. We entirely agree with the author when he says that "good sanitary work is really cheap in the long run," and that all the sanitary fittings of the house should be periodically tested as to their integrity. All interested in desiring to know where defects are likely to be found in house-fittings will find this brochure a useful guide.

Post-mortem Examinations in Medico-Legal and Ordinary Cases. By J. Jackson Clarke, M.B. (Lond.), F.R.C.S. London: Longmans, Green & Co. 1896.

This is an excellent little manual. The author very carefully and graphically describes how to conduct an autopsy, and how to examine the various viscera after removal from the body. Special directions are given for cases of poisoning, cases of suspected criminal abortion, and for the examination of the

bodies of new-born infants. Tables for reference are given, stating the average size and weight of normal organs, the developmental changes in the fœtus, &c. Chapters are devoted to the legal aspects of post-mortem examinations, and to the granting of death certificates. A special feature of the work is the description of the antiseptic precautions which should be taken to eliminate all chance of danger to the operator, or of conveying septic material to his patients. We can confidently recommend this work to students, and to practitioners who are not in the habit of conducting post-mortem examinations. It is well illustrated.

Dress and Health: an Appeal to Antiquity and Common Sense. By Charles Moore Jessop, M.R.C.P. Lond. London: Elliot Stock. 1896.

This is a reprint of two essays read before the British Medical Association in 1887 and 1889 respectively. The first contains the author's views on the subject of beef-tea, which he considers is most wrongly and wastefully prepared at present in our large institutions and in private families. The second treats of dress, ancient and modern.

Vol. I. By Dr. C. Binz. Translated from the Second German Edition by Arthur C. Latham, M.A., M.B. Oxon., M.A. Cantab. London: The New Sydenham Society.

In this volume the author has presented to us in as complete a form as possible the pharmacology of certain groups of medicinal substances.

The term pharmacology has not always had the same meaning, nor has it at the present time the same meaning in different countries. The author, therefore, in his introductory chapter defines what is meant by the term as he uses it. "Pharmacology," he states, "is the term used in Germany to denote the scientific investigation—with reference specially to the requirements of the physician—of such substances as are contained in the official pharmacopæias of various countries and are employed in the treatment of disease. Moreover, corresponding with the original twofold meaning of the word  $\phi \hat{a} \rho \mu a \kappa o \nu$ , pharmacology includes the investigation of such inanimate chemical bodies as, acting externally on man or his

surroundings, may disturb his normal existence and so become poisons. Science, however, derives its best stimulus from the teacher's own activity in research, and we therefore include in pharmacology the search after fresh knowledge, the establishment of new facts, and the clearing up of old in both divisions."

In discussing the various substances dealt with, the author's object has been to give the reader an idea of how they came to be used in medicine, and a scientific explanation of their action

on the human body.

For the latter purpose he takes advantage of such experiments on animals as will throw light on the subject, but he leaves out of account the scientific details of the action of medicines or poisons on particular organs if they have as yet no apparent meaning to the physician. He thus excludes much which is of little interest except to the scientist. On these lines the author has been peculiarly successful in producing a series of articles of great interest to the student and physician who would have an intelligent knowledge of their subject, and who would base the treatment of their patients on scientific principles and not on mere empiricism.

The articles are in lecture form, being practically a reproduction of a series of lectures and demonstrations delivered at the Pharmacological Institute in the University of Bonn. The volume should serve as an excellent example to lecturers, indicating as it does the interesting manner in which the

subject may be dealt with.

The translator has performed his task well, his avowed purpose being to give the sense of the original rather than a too literal translation. The proofs have passed through the hands of Professor Binz, who has taken the opportunity of adding much fresh material and making many corrections.

The principal substances dealt with in this volume are—anæsthetics, hypnotics, aconitine and allied drugs, the nitrites, iodine and its preparations, atropine, caffeine, digitalis, ergot, calabar bean, pilocarpine, nicotine, strychnine, ammonium salts, alcohol, and the ethereal or essential oils.

A Guide to Practical Chemistry for the Conjoint Board. By PERCY A. E. RICHARDS, F.I.C., F.C.S. London: Baillière, Tindall & Cox. 1896.

This is a well arranged little book of fifty-seven pages adapted to the requirements of the examination in practical chemistry for the English Conjoint Board. There are full

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directions for the preparation of the salts mentioned in the syllabus, and a scheme for the examination of a simple salt.

The following is an example of one of the errors contained in the book:—On p. 11, "Potassium iodine, brown precipitate," while in fact this reagent added in excess yields a yellow solution, preceded by the production of a precipitate only in the case of some solutions of bismuth salts.

The Causes and Treatment of Rheumatoid Arthritis. By SAMUEL HYDE, M.D. London: John Bale & Sons. 1896.

This is an excellent manual which we have much pleasure in recommending, mainly on practical grounds, to the attention of our readers. It is only in recent years that a bright ray of hope has shone upon the prospect of sufferers from rheumatoid arthritis in its well-marked forms. There can be little doubt that amongst those who do not devote special attention to the study of this disease, much opportunity of benefiting patients is lost thorough the belief that rheumatoid arthritis is a form of rheumatism, or of gout, or is a combination of the two. The present volume will help to disabuse the reader's mind of this idea. The directions for treatment are clearly laid down. Dr. Hyde gives us his theory of the pathology of rheumatoid arthritis, but we believe that the practical side of the work is the more truly valuable.

Rheumatoid Arthritis: its Pathology, Morbid Anatomy, and Treatment. By GILBERT A. BANNATYNE, M.D. Glas., M.R.C.P. Ed. Bristol: John Wright & Co. 1896.

In its historical aspect, as presented for instance in the first chapter, this work is full and interesting. The illustrations also constitute a commendable feature. But for the rest, the book stands in need of a thorough revision—revision as to both form and content. Careless proof-reading doubtless accounts for much; for example, we find on a single page two words each spelt in two different ways. But the style throughout, beginning with the preface, is slipshod to a degree. Perhaps Dr. Bannatyne may reply that he has authority on his side, for, unfortunately, a loose English construction is not wholly abjured among medical writers of the highest standing in Britain, and scarcely anything could be more shocking than some passages in a volume recently translated by the New Sydenham Society.

If the form of Dr. Bannatyne's work may be fairly objected

to, we feel bound also to comment unfavourably on some of the subject matter presented to us. Take this as a sample of an argument:—"In this, as in other bacterial diseases, we have no definite proof that it is not the micro-organisms themselves which cause the changes in the nerve system; but all argument, analogy, and proof are against their doing so" (pp. 35, 36. The italics are ours). Another objection we have to make is to the needless repetition of passages in Chapter II. And in general there is a diffuseness and lack of systematic arrangement throughout the work.

At the same time, due credit must be given to the author for having, in association with Dr. Wohlmann, demonstrated what seems likely to prove to be the specific organism of rheumatoid arthritis. This microbe has been studied by Dr. Blaxall, and a lengthy report by the latter on its characters is incorporated in the present work. The organism was found in the synovial fluid in rheumatoid arthritis, but not in other diseases. In severe cases of rheumatoid arthritis it

was also found in the blood.

The remarks on treatment deserve attention, coming as they do from one who speaks from practical experience. Dr. Bannatyne states that carbonate of guaiacol is the drug on which he places most reliance, and he says that in few cases has he found it to fail ultimately. He gives 5 to 10 grs. three or four times a day. Of course, he does not profess to cure rheumatoid arthritis unless it comes under treatment in an early stage; but the arrest of the active morbid process and the relief of the patient's sufferings are a worthy object to aim at.

Rheumatism: its Nature, its Pathology, and its Successful Treatment. By T. J. Maclagan, M.D. Second Edition. London: Adam & Charles Black. 1896.

WE have pleasure in calling the attention of our readers to the publication of the second edition of Dr. Maclagan's work on rheumatism. Twenty years have now elapsed since he "introduced salicin to the notice of the profession as a remedy in acute rheumatism," and the presentation of his matured views on the pathology and treatment of the disease will no doubt be welcomed by medical men. Dr. Maclagan, rejecting the lactic acid and the neurotic theories of the origin of rheumatism, believes that the disease is miasmatic in origin. "We believe the rheumatic poison to be malarial in nature. If it be so, it is a minute parasitic organism whose morbific

action, like that of the plasmodium malariæ, is dependent on its growth and reproduction in the system; and which, like all other parasitic organisms, has a special nidus which is essential to its vivification, without which it cannot enter on its disease-producing career, and whose special seat is likely to impart to rheumatic fever, as it does to ordinary malarial fever and to each of the specific fevers, the peculiarities which are distinctive of it" (p. 83). This gives us the key to Dr. Maclagan's views as to the nature and treatment of The arguments adduced by the author are almost wholly speculative. He has no experimental facts to adduce in support of his theory, nor do we learn that he has ever demonstrated "a minute parasitic organism that of the plasmodium malariæ" in the blood of his patients suffering from rheumatic fever, or in their inflamed fibrous tissues. Although we are far from denying that Dr. Maclagan may be right in his supposition, we are quite sure that nothing short of such a demonstration will nowadays be accepted as conclusive proof. The clinical and therapeutical sections of the book are of great interest, and may be read with profit and pleasure.

Practical and Operative Gynæcology. By J. CLARENCE WEBSTER, M.D., F.R.C.P. Ed. Edinburgh and London: Young J. Pentland. 1896.

LIKE all Dr. Clarence Webster's writings, this little book on practical and operative gynæcology is of very considerable merit. There is nothing new in the work; it is simply a description of the modern methods of clinically investigating and treating diseases of the female pelvic organs. Its merit, however, is in the clear manner these are given, for even the beginner will have no difficulty, we imagine, in following the author through each page of the book.

The only fault we have to find with the work is that perhaps it is too condensed—too much in the form of a synopsis of the subject. This makes it more difficult for the reader to keep up the interest, we fancy; he is apt to become wearied with so many facts and details crowded so closely

together.

The volume is divided into three parts. Part I is devoted to "Case Taking," Part II to "Minor Therapeutic Measures," and Part III to "Operative Measures."

We have very great pleasure in heartily recommending this book to all students commencing the study of gynæcology.

Transactions of the American Surgical Association. Vol. XIII. Edited by DE FOREST WILLARD, M.A., M.D. Philadelphia. 1895.

This, the thirteenth volume of these Transactions, is quite up to the level of interest of its predecessors, and of considerably greater bulk. It contains thirty-tive articles on surgical subjects by various authors more or less well known. These articles necessarily embrace wide limits, and deal with very varied subjects. In this volume, however, three subjects have received special attention—viz., that of fractures and dislocations, that of affections of the genito-urinary organs, and that of anæsthetics. To these three subjects have been devoted sixteen of the thirty-five articles.

The volume contains nothing new or original, but much of its matter is of very considerable interest, and will repay reading. It is well got up—paper, type, and illustrations

alike being excellent.

A Pictorial Atlas of Skin Diseases and Syphilitic Affections in Photo-Lithochromes from Models in the Saint Louis Hospital of Paris, with Explanatory Woodcuts and Text. Edited and Annotated by J. J. PRINGLE, M.B., F.R.C.P. Parts V and VI. London: The Rebman Publishing Co., Ltd. 1896.

PARTS V and VI of this atlas are now to hand, and the high standard of artistic and literary excellence manifested in the preceding parts is quite maintained. The diseases illustrated in the present number are agminate trichophytic folliculities (ringworm of the neck), text by Sabouraud; lupus pernio-(chilblain lupus), text by Tenneson; papulo-tuberculous syphilides, spreading centrifugally, text by Hallopeau; dermatitis vacciniformis infantilis and acute ecthyma of infancy, text by Hallopeau. In addition to the plates several excellent woodcuts are found in the text. We would take special note of the excellence of the plates illustrating lupus pernio and papulotuberculous syphilides. They are life-like in their realism, sothat in looking at them we could almost imagine we were examining the living patient. M. Hallopeau's remarks upon the origin and nosological significance of such syphilides are well worthy of careful study.

Part VI is also of great interest. The diseases illustrated are (1) lesions resulting from the cocaine and morphine habits (Gaston); (2) ringworm of the body (Sabouraud);

(3) syphilitic hyperkeratosis (L. Jacquet) and psoriasis figurata (L. Jacquet).

We have again most cordially to recommend this atlas to

physicians and dermatologists.

The Spas and Mineral Waters of Europe, with Notes on Balneo-Therapeutic Management in Various Diseases and Morbid Conditions. By HERMANN WEBER, M.D., F.R.C.P., and F. PARKES WEBER, M.D., M.R.C.P. London: Smith, Elder & Co. 1896.

WE have nothing but praise for this new guide to the European health resorts. The book contains 380 pages, is beautifully printed, pleasantly written, extremely full, and altogether very interesting. It includes a bibliography and an excellent index. The therapeutics of plain water, and of the various classes of mineral waters, and the influences of the change of air, scene, diet, and exercise at spas are duly considered. A chapter is devoted to table waters, another to marine spas, and another to the balneo-therapeutic management of different diseases. The practitioner who sends patients to watering-places need desire no better guide than the present volume to aid him in his selection of the appropriate resorts.

What to do in Cases of Poisoning. By Wm. MURRELL, M.D. Eighth Edition. London: H. K. Lewis. 1897.

THE appearance of the eighth edition of this little manual proves its great utility to the practitioner. The present edition has been thoroughly revised, and an index, which is likely still further to increase the utility of the book, has been added.

Edinburgh Hospital Reports. Edited by G. A. GIBSON, M.D., D.Sc.; C. W. CATHCART, M.A., M.B.; JOHN THOMSON, M.D.; D. BERRY HART, M.D. Fourth Volume. Edinburgh and London: Young J. Pentland. 1896.

This publication is always of interest to us as being a record of work done in the Edinburgh Medical School during the year gone by, for the excellence of the book must in a measure indicate the mental vigour of the school. We are

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delighted to learn from the preface that each succeeding volume has more firmly established its position, and that the

circulation is increasing.

This year's reports is in every way a counterpart of the other three. The nature and scope of its articles are much the same as formerly, and if none of these papers are of the highest order, many of them show most careful and painstaking work, and add in no small measure to the medical literature of our country. If one wanted to find a fault it would be that there is possibly too great a tendency to report one, or possibly two cases, and to use these as an excuse for giving a clinical lecture on the subject under consideration. But if this be a fault, it must in justice be said that it is usually well executed.

There are some forty-seven articles in all, and many of these are of much interest. We have only space to mention a very few of them. Dr. Stockman records a case with many of the symptoms of pernicious anæmia. The post-mortem examination showed the large intestine to be very greatly distended, and its walls much atrophied. The hæmogloblin we note was deficient in direct proportion to the deficiency of the red blood corpuscles. There was no excess of iron in the liver. The condition of the bone marrow is not mentioned. We are not quite sure that this is a case of pernicious anæmia, at least in the more restricted sense of that term. Dr. Affleck and Dr. Leith give us a case of sarcoma of the suprarenal capsules, where the suprarenal tissue was quite displaced by the new growth. There was no pigmentation of the skin. We must also mention a case, reported by Dr. Gibson and Dr. Cattanach, of infantile paralysis affecting the right arm, where there was associated with it a paralysis of the right side of the face, and some defect of taste on the right side of the tongue. Dr. Lundie reports a case of loss of speech in a child where both the onset and recovery were gradual. Dr. Philip's paper on "so-called causeless hemiplegias" is also of much interest. Dr. Turner writes a well arranged and a clear account of "facial paralysis and the sense of taste." We also note Dr. Stalker's two cases of aphasia, but we cannot altogether endorse his subsequent remarks. We hold that every symptom should, if possible, be explained by the presence of a corresponding lesion; and if the fields of vision had been noted, and a careful enquiry made as to the patient's memory for places and objects as well as words, it is possible that some localisation might have been given to the lesion.

In surgery, Dr. John Duncan contributes a paper on laparotomy as a method of treatment in tubercular peritonitis. His

experience extends to some twenty-one cases, and the general results seem favourable to the operation. Then Dr. Wallace writes an excellent lecture on the administration of chloroform, which should be of much use to students and to others who may not yet have learned how to administer this anæsthetic.

Apart from the articles, the book is well printed, well illustrated, well bound, and altogether it makes a very hand-some volume. We recommend it with every confidence to

our readers.

Janus: Archives Internationales pour l'Histoire de la Médecine et la Géographie Médicale. Paraisant tous les deux mois. Directeur, Dr. H. F. A. PEYPERS. Amsterdam. 1896.

"JANUS" is the title of a new medical periodical devoted to the study of medical history and geography. In these days this may be regarded as a new departure in medical journalism. as it is probably known to very few that on several occasions during the last hundred years attempts have been made to establish periodicals devoted to the history of the healing art. The present journal is a resuscitation of an older and defunct journal of the same name, as we gather from the excellent historical account by Professor Stokvis in the first number. In the latter part of the eighteenth century, Archives of the history of medicine had been published at Nuremberg and at Venice; but Janus, of which the present journal is a revival. was the first of the attempts made in the nineteenth century to establish such a periodical. The first Janus was published at Breslau in 1846 under the editorship of Henschel, professor of clinical medicine there. It became defunct in 1848, and was revived at Gotha in 1851, but only existed for a few After this no attempt of a similar kind was made till 1878, when the brothers Rohlfs founded the German Archives of medical history, which ceased to be published in 1885. 1886 Portuguese Archives of medical history appeared, but only survived for a year. Such, in brief, is the rather melancholy history of this department of medical journalism. We sincerely trust that the present attempt may prove more successful. The subject of medical history is one of great interest and even of importance, although to-day, as in 1846, it is rather apt to be crushed out of sight by the vigorous growth of modern medicine.

The journal is international in its scope, and the articles are printed for the most part in the language of the con-

tributors. There is a long list of editors and collaborators; and the papers which have already appeared cannot fail to be of the greatest interest to all lovers of archeology and geography in their medical aspects. Among the names of the collaborators we note that of Dr. James Finlayson, and in the third number we observe a paper from his pen entitled "Dr. Robert Houston of Glasgow, the First Ovariotomist." In the first number also, over the name of Dr. C. Creighton, there is a very favourable review of Mr. Duncan's History of the Faculty of Physicians and Surgeons of Glasgow, in the course of which reference is also made to Finlayson's memoir of Peter Lowe and Glaister's biography of Smellie.

We think that the value of the journal would be improved by a more detailed table of the contents of each number, and by the introduction of headlines to the pages. We wish

every success to Janus redivivus.

Wright's Improved Physicians', Surgeons', and Consultants' Visiting Lists. Compiled by ROBERT SIMPSON, L.R.C.P., L.R.C.S. Fourth Edition. Bristol: John Wright & Co. 1897.

THIS elaborate yet very handy visiting list is issued in three forms, at the uniform price of 5s. 6d., post free. In one form the patients names are written monthly, and in another weekly, whilst the third constitutes a perpetual list. The book is sure to satisfy the busy practitioner.

Letts's Diaries. London: Cassell & Co., Ltd. 1886

WE have received a number of these useful memoranda books. The medical diaries are well suited for the requirements of practitioners; and in particular we would call attention to the "Office Diary" for 1897, No. 8, as being a very convenient book for daily records, whether of medical or general matters.

Smith's Physicians' and Surgeons' Visiting List for 1897. Twenty-first Year. London: Hazell, Watson & Viney, Ltd. 1897.

This also is a very neatly got up and convenient pocket book for practitioners.

# ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### NERVOUS DISEASES AND INSANITY.

By Dr. R. S. STEWART.

Heredity in Psycho-pathology. By Crocq (Le Progrès Médical, 17th October, 1896).—The following are the conclusions arrived at. Psychopathic heredity may be similar to heredity in other morbid states, but it manifests itself much more often under the form of heredity of transformation. This last depends on the diathesic state, which is itself only a morbid condition, eminently hereditary and characterised by an alteration of the nervous system, bringing in its train intellectual or nutritive changes more or less profound. The diathesic affections are numerous, but they all form part of one vast morbid family, and they may be transformed, the one into the other, in passing from parent to child, and they are capable of being transformed into psychoses. There is only one diathesis, that special morbid state of degeneracy, innate or acquired, which gives rise to the numerous diathesic maladies, and to psychopathy in particular.

Lesions of the Cells of the Central Nervous System in Experimental Addisonian Intoxication. By Ettlinger and Nageotte (Le Progrès Médical, 5th December, 1896).—As the result of extirpation of the suprarenal capsules in animals, death constantly occurs with paralytic symptoms. This has been shown by two other observers to be due to auto-intoxication. The histological changes found in the nerve-cells alike of the cerebrum, cerebellum, and spinal cord consisted of a breaking up and pulverising of the chromatophile substance of the protoplasm, a fissuring of the achromatic substance, with general thickening and swelling of the protoplasmic prolongations, and these observers consider that the nervous symptoms in Addison's disease are related to these lesions.

Thyroids in Catalepsy. By Rogers (American Journal of Insanity, July, 1896).—From the prolonged observation of two cases of catalepsy in which all other modes of treatment proved inefficacious and in which complete success resulted from the use of thyroid, the writer concludes that in conditions marked by inhibition of sensory, motor, and mental activity, without gross organic lesion, such as obtain in katatonia and in certain types of stuporous insanity and melancholia, benefit is to be expected from thyroid medication judiciously used; that the effects of thyroid in full doses bear a striking resemblance to many of the symptoms of Graves' disease—viz., orbicular weakness, consecutive conjunctivitis, skin eruptions and temporary bronzing without icterus of eyes, profuse local fætid sweats, subjective sense of heat and thirst, excessive metabolism, decided tachycardia and the absence of any fixed relation between pulse-rate, temperature, and respiration; and that, in so far, the theory of Möbius that Graves' disease is due to hyperactivity of the thyroid gland, is strongly supported.

Paretic Dementia. By Neff (American Journal of Insanity, July, 1896).—A statistical analysis of 368 cases of general paralysis admitted to the Michigan State Asylum. The proportion per cent of all admissions—8.3—is very similar to that prevailing in England, but the relative number of females is smaller, though recent years show a marked increase in women. Syphilis as an etiological factor existed in 42 per cent in both sexes, but in 55 per cent in the women, and intemperance in 31 per cent. The average duration in

cases ending in death was for males three years, and for females three years and four months.

Increase of General Paralysis in England and Wales.—The following is a summary of a paper by Dr. R. S. Stewart in the Journal of Mental Science for October, 1896:-

1. There is no evidence of increasing liability to insanity on the part of the

English race.

There is evidence of an increasing tendency to general paralysis.

3. This is most pronounced among males, in whom the increase is nineteen

times what it is in women.

4. Among males the increase in private patients is more than twice that in pauper patients; in the former it is steadily progressive, in the latter it is a diminishing increase. Among females the increase in paupers is slight. In private female patients there is a steadily maintained diminution.

5. The age at which the increase of general paralysis attains its maximum is the decade 35 to 44; in other forms of insanity the increase occurs at ages

over 45, and is greatest at ages over 55.

6. The increase is greatest among married men, being five times that which occurs in unmarried men, and sixty times that in married women.

7. The greatest increase is found in large urban centres, most so in seaports and, in particular, coal-exporting towns; the next greatest in coal-mining counties and manufacturing towns, while in agricultural counties there is a decrease. A close parallel, as regards geographical distribution, is to be traced between the increase of general paralysis and the occurrence of the offence of drunkenness.

8. The etiological factors most responsible for the increase are alcoholic intemperance, sexual excess, and venereal disease. The causes connected with the reproductive life of women are diminishing as factors in the production of general paralysis. The increase finds its origin in causes related to

the self-regarding, not the altruistic, instinct.

9. The increasing prevalence of general paralysis indicates a change in the type of insanity, a reversion to a lower form of brain disease, increasing moral and physical decadence, lessening power of resistance and diminishing vitality, and increasing tendency to premature and rapid racial decay.

10. The affection being absolutely fatal, and the causes being to a very large extent controllable, the only direction in which the remedy is to be sought is

in that of prevention.

Murray's Royal Asylum, Perth: Annual Report for 1895-96.

—A recovery-rate of 41 86 per cent of admissions, and a death-rate of 3 57 per cent of average number resident, are very favourable features in the year's record of this institution. Among the recoveries there was one in which, in Dr. Urquhart's opinion, the restoration to health is to be attributed to treatment by thyroid extract; and in two other cases associated with peripheral neuritis and psoriasis very remarkable improvement resulted from the same method of treatment.

Montrose Royal Asylum: Annual Report for 1896.—This institution receives both private and pauper patients. Its recovery-rate amounts to 38.63, and its death-rate to 8.52. Speaking of the influence of the insane upon the sane, Dr. Howden says that in his experience, extending over forty years, asylum attendants are not liable to become insane; but three instances are recorded in his report in which association with the insane outside of asylums had a prejudicial effect on those in attendance. Twenty-one per cent of all Scotland's pauper lunatics are cared for outside institutions, and one wonders whether their attendants suffer any ill effects.

Mortality from Suicides. By Marsh (published by the Mutual Life Insurance Company, New York, 1896.)—An analysis of the records of

this company for the ten years 1884-93 reveals the fact that there has been a very marked increase in the mortality-rate from suicide. During the thirty years 1844-73 the percentage of suicidal deaths was 1·1, and in the ten years under review it amounted to 2·1. The largest proportion of these deaths occurs from 20 to 50 years of age, and the increase is greatest among the risks insured during the last six or seven years of the decade, and greatest during the third, fourth, and fifth years of insurance. It is pointed out, in relation to this last statement, that the number of suicides after the second year of insurance began to increase almost immediately after the introduction, in 1886, of a provision by which the insured agrees not to die by his own act within two years.

### MATERIA MEDICA AND THERAPEUTICS.

By C. O. HAWTHORNE, M.B.

Treatment of Malignant Tumours by Mixed Toxins.—Dr. Coley, surgeon to the New York Cancer Hospital, has studied the effects produced on malignant growths by the subcutaneous injection of the toxins of erysipelas and bacillus prodigiosus. The cases observed numbered 160, and included almost every variety of sarcoma and carcinoma. The majority of the cases had been condemned as unsuitable for operation, and many were recurrent after operation. Dr. Coley was led to this line of investigation by an experience in which a small round-celled sarcoma, five times recurrent, was cured by an accidental attack of erysipelas. At first he used injections of living broth cultures with a view to produce erysipelas, but observing that improvement followed, especially in sarcoma, even when no ervsipelas was produced, he concluded that the toxins, and not the living germs, were the curative agents, and in the further experiments he employed the toxins alone. His general conclusions are that the mixed toxins exercise an antagonistic and specific influence on malignant tumours, which influence, in a certain proportion of cases, may be called curative; that the effect of the toxins is most marked in sarcoma (especially in spindle-celled sarcoma), and only slight in carcinoma, including epithelioma. Dr. Coley considers that these agents should be reserved for use in "inoperable" cases of sarcoma, or after primary operation, to prevent recurrence.—(Lancet, 5th December, 1896, p. 1620.)

The Influence of Arsenic and Potassium Iodide on Multiple Malignant Growths .- At a recent meeting of the Clinical Society of London, Mr. A. Pearce Gould showed a woman in whom an amputation of the breast was followed by the appearance of multiple malignant growths, which subsequently disappeared spontaneously. In the discussion upon this case several parallel cases were quoted, and the removal of the growths in some of the cases was attributed to internal medication. Dr. Pringle said he quite recognised the fact that sarcoma of the skin disappeared under the influence of large doses of arsenic. Mr. Golding-Bird quoted a case of sarcoma of the testicle in which, after removal, there was subsequent development in the cord with extensive infiltration of the neighbouring skin, these conditions entirely disappearing when arsenic was given in rapidly increasing doses so as to reach poisonous effects in the course of ten days. Dr. Savill referred to a case of widely diffused sarcomatous growths treated successfully by iodide of potassium. Cases of skin cancer cured by the internal administration of arsenic have been reported at various times (see British Medical Journal, 17th June, 1893, and 9th September, 1893).—(British Medical Journal, 5th December, 1896, p. 1642.)

The Result of an Excessive Dose of Quinine Sulphate.— Mr. N. C. Ridley, M.B., reports a case in which a man, æt. 28, took by accident 140 grs. of sulphate of quinine. In about an hour the patient became apparently comatose, but this condition passed away, and next day he was totally blind and almost absolutely deaf. The deafness gradually diminished, so that in the course of a day or two patient could hear perfectly. On the other hand, the amaurosis was more persistent, and it was not until the third day that there was even perception of light. The next day objects were seen dimly, as through a dense mist, and everything appeared of a red colour. Vision gradually improved, but even at the expiry of two months was far from perfect. The eyes examined at this date showed marked contraction of the visual fields, more especially in the vertical meridian. There were no island scotomata such as have been noted in some other cases. Each fundus showed a pale disc with much contracted blood-vessels—the arteries especially. The treatment adopted was to insist upon moderation in smoking, with the occasional inhalation of amyl nitrite. Mr. Ridley remarks that after such an interval of time it is probable that organic changes have occurred in the walls of the retinal arteries, and that therefore the nitrite cannot be expected to have much influence. The prognosis need not necessarily be bad on this account, as the cause of the condition having ceased to act it may be reasonably hoped that the vessels will readjust themselves to the physiological requirements of the parts. Swanzy has tried amyl nitrite in similar cases and recommends its use.—(Clinical Journal, vol. ix, p. 73.)

The Fundamental Treatment of Disease.—Under this heading Mr. Malcolm Morris satirises a school of American specialists who look for the cause of all diseases in the rectum. These practitioners, it seems, have their own Journal of Orificial Surgery, and their "beginning of therapeutic wisdom is to dilate the rectum; . . . if dilatation fails, the rectum can be faradised, and as a last resource excised. Should the disease still prove refractory, the other orifices can be attacked one after the other." This is the form in which Mr. Morris presents a case reported in the special Journal of the cult:-The patient, æt. 26, suffered from a cough and various nervous troubles. She was recommended to take up her abode in the same house as the doctor, who then laid regular siege to the disease. He first poured in a hot fire of drugs; next he brought up his heavy artillery in the form of faradisation and galvanisation; then he tried to carry the place by storm by dilating the rectum. The enemy, however, was difficult to dislodge, and the siege was continued with galvanisation of the solar plexus and both vagi, nasal sprays, and instillation of verbascum oil into the ears. Finally came a combined attack in force: the hymen was excised, there were further dilatations and faradisations, and at last the doctor's skill and determination were rewarded with complete victory.—(Practitioner, September, 1896.)

The Treatment of Graves' Disease.—The following notes are extracted from an article by Dr. Dreschfeld, and deal for the most part with

his personal experience :--

General Treatment.—Prolonged rest in bed is no doubt often of benefit, especially in patients of excitable temperament, and who have neurasthenic symptoms. But with other patients it does not agree, and is apt to produce insomnia. Change of air and surroundings is often beneficial, and a bracing mountain climate is preferable to the seaside, though the latter appears to suit young chlorotic patients. The patient should be well fed, and the food given in small quantities at frequent intervals; forced feeding, however, is not well borne. Marked benefit, with amelioration of all the symptoms, and increase of the body-weight follow the administration of pancreatic emulsion.

Medicinal Treutment.—Dr. Dreschfeld agrees with Wilks and Gowers, that on the whole belladonna is the most useful of the numerous drugs recommended. Improvement is slow, but if the treatment be continued for weeks, decided signs of advance will appear. Dr. Dreschfeld finds no advantage from increasing the dose or giving very large doses. The various complications are dealt with on the usual lines. For acetonæmia all food by the mouth should be stopped, and the patient fed by enemata; large doses of potassium citrate in

water had the best effect in checking the vomiting. In one case, where the pulse became very quick and thready, subcutaneous injections of about half a pint of normal salt solution, repeated three times in the twenty-four hours. brought about an abatement of the symptoms; the effect was very prompt and No reference is made to the use of opium in small doses as recommended by Cheadle (Clinical Journal, vol. iv, p. 347) and Goodhart (Common Neuroses, p. 77), a form of treatment which we have found of decided value. Electricity, Dr. Dreschfeld says, is highly to be recommended. On the whole, he gets the best results by the daily use of a weak galvanic current. With regard to gland extracts, he has tried thymus extract in three cases without any marked benefit. Thyroid extract, in acute and severe cases, he finds harmful. as it increases the emaciation, the frequency of the pulse, and the gastric and intestinal troubles; in the more chronic cases where the vascular irritability is less it may do good. He has had no experience of the use of the blood serum of dogs in which the thyroid gland has been extirpated, though he thinks this treatment as introduced by Ballet and Enriquez rests upon a sound basis, at least in theory. Surgical interference, Dr. Dreschfeld thinks, should be reserved for cases where the enlarged thyroid impedes in a serious way the breathing, or where in chronic cases all other treatment has failed to produce relief. —(Practitioner, August, 1896.)

Caffeine in the Cardiac Failure of Pneumonia.—Dr. Cassine, in discussing the treatment of pneumonia, refers to the value of cardiac tonics, and recommends, when there are evidences of cardiac failure, the use of caffeine hypodermically. He makes a solution by dissolving forty grains each of caffeine and sodium benzoate, in three fluid drachms of boiled distilled water. Of this solution he orders two or three hypodermic syringefuls in the course of twenty-four hours. In old people and in alcoholics, he finds caffeine superior to digitalis.—(Clinical Journal, vol. viii, p. 399.)

Eucaine, a Substitute for Cocaine.—De Mets has made comparative trials of these two local anæsthetics, using in each case a 2 per cent solution of the hydrochlorate. The solution of eucaine can be sterilized by boiling, an act which modifies and renders less active a solution of cocaine. Eucaine has the disadvantage of causing some smarting when applied to the eyeball, but it does not, like cocaine, lead to vaso-motor constriction, and therefore leaves the surface of the eye slightly injected, and does not give to it a white frozen appearance; neither is there any forward protrusion of the globe. Whilst fully equal in its anæsthetic effect to cocaine, it has a less decided effect on tactile sensibility; it does not contract the pupil. Its anæsthetic influence is manifested seven minutes after instillation, and is sustained from twenty to thirty minutes, It is superior to cocaine in affections of the throat and nose, as it has far less toxic influence on the circulatory apparatus, and in dental practice it has the further advantage that no ædema or infiltration occurs at the site of injection. De Mets finds a mixture of three parts of eucaine to one of cocaine a very useful combination.—(Epitome of Current Literature, Brit. Med. Jonra., 5th December, 1896.)

### MEDICINE.

By WALTER K. HUNTER, M.B., B.Sc.

Paralysis and other Complications following the administration of Large Doses of Arsenic.—At a meeting of the Société Médicale des Hôpitaux, Dr. Comby reported the following case:—The patient, a child of 7 years, when first under Dr. Comby's care, was suffering from a severe attack of chorea. The treatment consisted in large doses of arsenic,

235 milligrammes of arsenious acid being administered in eleven days. On the sixth day of treatment patient was sick and vomiting, evidently feeling the physiological effects of the drug. By the fifth day all choreic movements had ceased, and on the twenty-sixth day of residence patient left the hospital

perfectly well.

Forty-six days after the last dose of arsenic, paraplegia set in. The child could neither walk nor stand. The reflexes were gone, as were also the electrical reactions. The sense of pain was preserved. In a few days paralysis spread to the the trunk and arms, so that patient could not sit up in bed and could not feed herself. The sphincters at the same time became affected, and urine and fæces were passed in bed. This incontinence lasted for ten days. Three weeks from the onset of the illness, the other symptoms gradually began to lessen. The arms recovered first, then the muscles of the trunk, and then the legs. A month later patient could walk.

This paralysis being so extensive and intense, Dr. Comby regards it as due to an arsenical myelitis rather than to a peripheral neuritis.—(Gaz. Méd. de

Paris, 4th July, 1896.)

Dr. Lancereaux reports to the Académie de Médecine two other cases of arsenical paralysis. These are specially remarkable, in one case for the long duration of the paralysis, and in both cases for the fever and other signs

showing a close resemblance to those of enteric fever.

The first case is a child, aged 13, under treatment for psoriasis. Arsenic had been administered in doses running up to 30 drops of Fowler's solution per diem, and this for a period of three years. This drug had not been given quite constantly, but it never had been withheld for more than a fortnight at a time.

The nervous symptoms first showed themselves by a vague feeling of fatigue, followed by vomiting. There was no headache and no diarrhæa. Then the temperature was noted to be raised—evening, 103° to 104°; morning, 100° to 101°. The pulse ran from 100 to 130. This fever lasted for some fourteen weeks. In the third week of the fever pains were complained of in the feet, and there was some difficulty in moving the lower limbs, patient not being able to get out of bed. Appetite was now lost, emaciation set in, and sleeplessness or nightmare was constantly present. Ten weeks later paralysis and atrophy were noted in the extensors of the feet and legs. The knee reflexes were gone, the plantar reflexes diminished. Subjective sensations of burning and swelling were complained of in both feet, where also there was observed some loss of sensation to painful stimulation. The heart, lungs, and

kidneys seemed perfectly healthy.

The second case is a woman, et. 38, under treatment for enlarged glands in the neck and axilla. Fowler's solution, in doses of 12 to 30 minims daily, had been given more or less constantly for some fifteen months. Patient showed no marked effects from the drug till about the twelfth month of administration. Then the temperature was noted to be raised in the evening (101° to 102°), coming down in the morning to normal, but later on keeping pretty constantly at 101° and 102°. Next, patient complained of headache and a feeling of burning and swelling in the hands and feet. There was also some vomiting and diarrhæa. There was no distinct paralysis, but patient could not walk, for on attempting it she said she seemed to be standing on pin-points. There was much diminished tactile sensation in the first three fingers of both hands, and in the first four toes of both feet. Reflexes were almost gone. The drug was now stopped for a fortnight and the temperature fell to normal, but on resuming the treatment the temperature rose again and the other symptoms were augmented. Treatment by arsenic being given up the above symptoms all disappeared.—(Bul. de l'Acad. de Méd., 21st July, 1896.)

Addison's Disease with absence of both Suprarenal Capsules.—Dr. Rispal reported this case at the Congress of French Medicine held in August, 1896. The patient, a young man aged 24, previously in excellent health, and without known cause, became the subject of Addison's

disease. The symptoms were typical—pigmentation of the skin and mucous membranes, general weakness and emaciation, gastro-intestinal troubles—ending with death in six months. At the post-morten examination there was found to be total absence of anything corresponding to suprarenal capsules. The abdominal sympathetic system seemed perfectly normal, and no tubercular lesion of any kind was to be found. Dr. Rispal adds that he will not venture to draw a deduction from such an exceptional condition, and he says he can only find two other similar cases recorded.—(Reported in Le Progrès Médical, 29th August, 1896).

Muscular Rigidity following Tetanus.—Dr. de Brun (of Beyrout) has described three cases in which certain tonic muscular contractions persisted for months after recovery from tetanus. In the first case the typical tetanoid convulsions lasted with gradually lessening severity for about a month, when the patient might be said to have recovered except for certain muscular contractions which still persisted. These contractions were in the calf of each leg, in the left biceps, and in the left masseter muscle. contractions in the legs fixed the feet in the position of extension. Active or passive motion was very slight, and if attempted much pain was felt in the affected muscles. In standing or in walking, the heels were a considerable distance from the ground, the patient resting or going on tiptoe. contracted left biceps caused semiflexion at the elbow, and the rigid left masseter a disfigurement of the face. Rigidity to a lesser degree was noted in the sacral and lumbar muscles, and in the muscles about the left shoulder. A good deal of pain was present in all the affected muscles. They were always painful to the touch, and on palpation were noted to be hard as a piece of wood.

The above rigid conditions gradually passed off, and at the end of about

four months the patient was quite well.

The second case was somewhat similar to the above. Here the patient was out of danger in a fortnight, but then he could not raise himself from the bed. He could walk aided by two attendants, but his limbs were painful and rigid, and the heels could not be put to the ground. At the end of three months patient, although in excellent general health, still complained of pain and rigidity in his limbs, and when walking he had to go on tiptoe.

rigidity in his limbs, and when walking he had to go on tiptoe.

As regards the third case, it is now five years since his attack of tetanus, and still the legs are affected with muscular rigidity. He cannot walk unaided by a stick, and even then it is with an effort that he can bring his heels to the ground. He has pain in his legs when walking. The muscles of the jaws are also affected, and even now patient cannot separate his front teeth more than a distance of 2 centimetres.—(Bull. de l'Acad. de Med.,

18th August, 1896).

Lesions in the Cord produced by Tetanus Toxins.—M. Marinesco has communicated to the Société de Biologie his observations on the alterations found in the spinal cords of guinea-pigs on injecting into these animals tetanus toxin. The changes are as follows:—Diffuse hæmorrhage into the grey matter of the cord, especially in the anterior cornua. Alterations in the nerve-cells, these being smaller than normal and having the form of a tip-cat in place of being polygonal. The cell plasma seemed granular, and did not show the differentiation on staining in the way the normal cells do. The cell nucleus was found modified only in the cases where the tetanoid convulsions had lasted for some considerable time, and then the nuclei were noted to be ill-defined and to stain more intensely than usual. In cases of chronic tetanus, degeneration of medullated fibres was observed.—(Gaz. Méd. de Paris, 11th July, 1896).

Case of Labio-Glosso-Laryngeal Paralysis of Cerebral Origin.—Dr. Picot and Dr. Hobbs reported the following case at the French Medical Congress held in August, 1896. Patient, et. 66, with previous

history of several apoplectic seizures, was suddenly attacked by paralysis of the lips, tongue, larynx, and pharynx. Articulation of words and phonation were suppressed, and, owing to paralysis of the tongue, the first act of deglutition could not be carried on. The soft palate muscles and the muscles of mastication were quite normal. No excess of saliva. Pharyngeal reflex lost; reflex of lower jaw exaggerated. Sense of taste perfect. No alteration in the electrical reactions, and no atrophy of the affected muscles. Patient died eight months after the seizure, and during these eight months no other

symptoms worthy of note showed themselves.

The post-morten examination revealed—(1) An old hæmorrhage the size of a pea situated at the posterior part of the right caudate nucleus. This lesion was bounded below by the optic thalamus, above and outside by the internal capsule, and in front by the part of the caudate nucleus not destroyed. (2) Some loss of substance at the outside of the right lenticular nucleus, at the most inferior part of the island of Reil, destroying the external third of the external capsule. (3) In left centrum ovale, in the anterior third of the frontal lobe, a softening the size of a lentil seed. No macroscopic or microscopic changes in medulla or cord were to be seen.—(Reported in Prog. Méd., 29th Aug., 1896).

#### SURGERY.

#### BY GRANT ANDREW, M.B., C.M.

Treatment of Empyema.—Samuel West, in the Clinical Journal (18th and 25th September, and 2nd December, 1896), discusses this subject at length. If pus be found in the pleural sac, it ought to be removed either by

paracentesis or by free incision.

1. Free Incision.—West insists on the use of the hypodermic needle in every case at the time of operation, no matter how clearly the symptoms point to empyema. The seat of incision should be the centre of the dull area, preferably in the posterior axillary line, and either sixth, seventh, or eighth interspace. Resection of a portion of the rib is not recommended as a routine practice. In many cases it is not required. It is never necessary to remove more than three-quarters of an inch of the rib; its removal should be done subperiosteally.

Should the pus be thick or curdy, washing out the cavity at the time of the operation is recommended. Dr. West has not found this a dangerous procedure if the solution be warm and have free exit. It is rarely necessary to wash out the cavity more than once, and that at the time of operation. A counter-opening is seldom made nowadays, except when the pus has

spontaneously discharged in an inconvenient situation.

The tube should first be made of such a length as to reach to the bottom of the cavity—perhaps four or five inches—and should have a diameter of about half an inch; or two tubes of smaller calibre may be introduced side by side. West threads the tube with strong silk, and fixes it to the chest-wall by adhesive plaster. The dressing is changed two or three times in the first twenty-four hours.

Mode of Cure.—When the pus is removed, the cavity becomes greatly reduced in size owing to the falling in of the ribs, the rising of the diaphragm, the return to some extent of the heart and mediastinum, and the re-expansion

of the collapsed lung.

The flattening of the chest-wall after a long-standing empyema he regards as due not only to the contraction of the fibrous tissue between the two layers of the pleura, but also to palsy of the intercostal muscles. This explains the disappearance of some of the flattening when the opening closes as the muscles again come into use.

One reason given for the re-expansion of the lung is that it loses its elasticity,

instead of re-expanding by virtue of its elasticity. The deformity is less in

children than in adults; in the latter the lung is often diseased.

It is unwise to remove the tube too soon. "If the tube cannot be removed within the first two or three weeks (and this is quite unusual), the rule to be laid down is that it should not be left out until it cannot be put in: that is to say, it should be forced out by the expansion of the lung or by the granulations filling up the track of the tube from the bottom."

Out of 134 cases operated upon and recovered, only 20 were healed within 6 weeks, and 16 of these were children. It is wise occasionally to examine the cavity with the probe, as a pocket may be left and may give trouble afterwards. The mortality directly due to the operation is very small-5 deaths out of 139 cases, or 3.6 per cent. In some cases where a discharge persists, no trace of cavity can be found; the granulations lining the track may be The risk of amyloid disease in these cases is exaggerated, as the tubercular.

discharge is small in amount.

If a cavity persists and cannot be got to close, two courses are openeither to leave it alone and allow Nature to effect a cure in her own time and way, or to perform an extensive operation (Estländer's operation). indications for such an operation are—the presence of a cavity of some size, and good grounds for supposing that it cannot be closed otherwise. Some time, months at least, must be allowed to elapse before it will be evident that the cavity will not spontaneously close. The operation is a serious and extensive one, greatly diminishes the strength of the thorax, and results in great deformity. The cavity must be carefully explored so as to ascertain its extent; a modified Estländer is no Estländer at all. The wedge piece of the ribs ought to be removed sub-periosteally, thus considerably diminishing the risk of hæmorrhage. In Ceecherelli's statisties, 50 per cent of the cases operated on were not improved, but made worse.

2. Paracentesis.—Paracentesis as a preliminary measure can do no harm,

even if incision be ultimately required.

In one series of 37 cases, paracentesis was performed in 23 prior to incision, 4 being cured by paracentesis only; and in a second series of 119 cases, paracentesis was performed in 51 prior to incision, out of which 10 were cured by paracentesis alone.

With an exceptional or localised empyema, free excision is the most expeditious means of cure; on the other hand, when the pus is deeply seated and difficult to reach, it is well to try paracentesis first. In connection with paracentesis, perflation is mentioned—the forcing of sterilised air into the upper part of the cavity to facilitate the escape of pus through the aspirating needle.

The writer thinks the apparatus of Parker too cumbersome, and that when

such is required, free incision is preferable.

A New Operation of Gastrostomy.—In the Rev. de Chir., November, 1896, Fontan, of Toulon, describes the following modification of this operation. This modification, like many others, is devised to furnish a valve-like opening in the stomach. It is described in stages, thus :-

1. Ordinary epigastric incision.

3. Seizure of the stomach wall by tooth forceps, and drawing it out through the abdominal wound.

3. Fixation of this en couronne to the margin of the wound.

4. The part of the stomach wall held by forceps is pushed back, and the two opposing serous surfaces of stomach stitched. A valve or tunnel is thus formed in which at present lies the biting end of the toothed forceps.

5. At the bottom of this canal an opening is made by a narrow bistoury, guided thither by the forceps. The opening into the stomach is thus ensheathed in a valve, like a bishop's mitre in shape, and formed by the stomach coat folded upon itself.

The writer found this modification a complete success.

Depage, of Brussels (Rev. de Chir.), p. 877, writes on "some observations on the technique of and indications for resection of the rectum in cases of cancer."

1. He operates in the gynecological position in order to give the pelvis a vertical direction. Median incision on posterior surface of pelvis; resection

of coccyx with one or two sacral vertebræ in case of necessity.

2. In disengaging the rectum, he takes care to leave adherent to the intestine as much of the cellular tissue and peritoneum as possible, so as to preserve its vascular supply from the superior hæmorrhoidal. The cancerous mass and infected glands are removed as a whole.

3. The peritoneal cavity is carefully closed immediately after disengagement

of the rectum and resection of the mass.

4. Bringing down the upper end to the anus, even in advanced cases. Gangrene need not be apprehended if the superior hæmorrhoidal vessels be preserved.

5. "Stuffing or suture of the wound in layers."

Depage does not usually perform colotomy beforehand except under two conditions—(1) If immediate operation be required and the patient's state is serious; (2) if the cancer be so spread that sacrifice of the rectum will be indispensable.

Resuls.—Ten cases operated on; two deaths. Of the eight cured, one is alive after three and a half years, another living after eighteen months.

Two died of recurrence one year after operation.

The others have been operated on too recently to express an opinion.

Depage thinks that recurrence is slower and rarer in cases of rectal cancer than in cancer elsewhere.

He insists on early operation.

Salpingo-Oophoritis. Reymond and Magill (in Annals of Surgery, September and October, 1896) describe at length the results of an experimental study of the pathological anatomy and bacteriology of the above affection, the following points being discussed:—(1) Condition of the tubal orifices, and adhesions to neighbouring organs; (2) modifications of the various tissues (mucous, vascular, &c.); (3) gonococcus infection; (4) streptococcus infection; (5) rarer forms of the disease (bacterium coli, staphylococcus, &c.). Only a few of the results can be noted here. Complete obliteration of the ostium werinum seldom occurs, the impermeability being due mostly to bending of the tube on itself. The arrangement of the various tissues under these circumstances is well described and illustrated. The ostium abdominale is closed by the reflexion of the fimbriæ and agglutination of their serous surfaces. Adhesion to the ovary occurs in the same way. The mucous surface never contracts adhesions. A number of diagrams illustrate the development of tubo-ovarian and intervening peritoneal cysts. The authors show that ovarian infection is often independent of an infected salpinx. The nodular and follicular forms of salpingitis are explained by the formation of cysts in the mucosa from agglutination of its folds, with subsequent tendency on the part of the cyst walls to be transformed not only into fibrous but also into muscular tissue (cf. Klebs' view of the origin of myomata). Complete obliteration of the cysts by the new formed tissue leads to the nodular form of salpingitis; incomplete, to the follicular form. Hence the myo- and fibrocystic forms of nodulo-follicular salpingitis.

Changes in the vessels are fully described, and the authors have been able to trace endarteritis to the direct action of the streptococcus. Oöphorosalpingitis due to the latter is frequent, and presents characteristic changes which contrast greatly with those resulting from the gonococcus. Inter alia, the ovary is more affected than the tube; all the structures of the pelvis are simultaneously affected; the peritoneum is contaminated from its deep aspect;

the clinical course is different.

It is worthy of note that the authors have found many sterile tubal collections

to contain the streptococcus when resort was had to inoculation.

For further details the reader must be referred to the original article, which, in spite of numerous solecisms and barbarous nomenclature, deserves to be read.—T. W. J.

### Books, Pamphlets, &c., Received.

- A Treatise on the Surgery of the Alimentary Canal, comprising the Œsophagus, the Stomach, the Small and Large Intestines, and the Rectum, by A. E. Maylard, M.B., B.S. (Lond.) London: J. & A. Churchill. 1896. (25s.)
- The Education of the Central Nervous System: a Study of Foundations, especially of Sensory and Motor Training, by Reuben Post Halleck, M.A. (Yale.) New York: Macmillan & Co. 1896. (5s. net.)
- Some Results of Induction of Premature Labour for Contracted Pelvis: a Study of Cases in the Glasgow Maternity Hospital, by A. A. Warden, M.A., M.B. Glasgow: A. Stenhouse. 1896. (1s. net.)
- Skiascopy and its Practical Application to the Study of Refraction, by Edward Jackson, A.M., M.D. Second Edition. With Twenty-seven Illustrations. Philadelphia: The Edwards & Docker Co. 1896.
- Catechism Series: Forensic Medicine. Edinburgh: E. & S. Livingstone. (1s. net.)
- Medicine and Kindred Arts in the Plays of Shakespeare, by Dr. John Moyes, of Largs. Glasgow: James Maclehose & Sons. 1896.
- Formulaire des Régimes Alimentaires a l'etat de Santé et a l'etat de Maladie, par le Dr. H. Gillet. Paris: J. B. Baillière et Fils. 1897. (3 frs.)
- A Treatise on Cholelithiasis, by B. Naunyn, M.D. Translated by A. E. Garrod, M.A., M.D. London: The New Sydenham Society. 1896.
- The Private Sanatoria for Consumptives and the Treatment adopted within them, by Dr. Arthur von Jaruntowsky, of Posen. Translated by E. Clifford Beale, M.A., M.B. (Cantab.) London: The Rebman Publishing Co., Ltd. (1s. 6d. net.)
- What to do in Cases of Poisoning, by William Murrell, M.D. Eighth Edition. London: H. K. Lewis. 1897. (3s. 6d.)
- Rough Notes on Remedies, by Wm. Murray, M.D. Second Edition. London: H. K. Lewis. 1897. (3s. 6d.)
- Compressed Air Illness, or so-called Caisson Disease, by E. Hugh Snell, M.D. (Lond.) London: H. K. Lewis. 1896. (10s. 6d.)
- A Pictorial Atlas of Skin Diseases and Syphilitic Affections, from Models in the St. Louis Hospital, Paris. Part VI. Edited by J. J. Pringle, M.B. London: The Rebman Publishing Co. 1896. (10s. 6d.)

# GLASGOW.-METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 19TH DECEMBER, 1896.

	1					
	WEEK ENDING					
	Nov. 28.	Dec. 5.	Dec. 12.	Dec. 19.		
Mean temperature,	45.8,	38.0,	41·2°	33·8°		
Mean range of temperature between day and night, .	5·9°	10·3°	7·4°	11·4°		
Number of days on which rain fell,	2	5	6	1		
Amount of rainfall,	0 ·03 in.	0·75 in.	1 ·38 in.	0.03 in.		
Deaths registered,	293	288	297	319		
Death-rates,	21.6	21.2	21.9	23.5		
Zymotic death-rates,	4.0	4.2	3.4	5:3		
Pulmonary death-rates, .	5.7	6.8	8.0	8.5		
DEATHS — Under l year,	55					
• •		69	72	64		
60 years and upwards, .	51	39	47	43		
DEATHS FROM— Small-pox,						
Measles,	27	37	30	45		
Scarlet fever,	2	4	3	2		
Diphtheria,	4	3	1	5		
Whooping-cough,	6	7	5	5		
Fever,	5	1	1	4		
Diarrhœa,	10	5	6	11		
Croup and laryngitis, .	3	4	3	2		
Bronchitis, pneumonia, and				_		
pleurisy,	58	74	84	73		
Cases reported— Small-pox,				•••		
Diphtheria and membranous						
croup,	18	12	10	23		
Erysipelas,	30	28	26	25		
Scarlet fever,	84	85	57	72		
Typhus fever,	1			1		
Enteric fever,	7	9	8	6		
Continued fever,				•••		
Puerperal fever,	3	2	3	2		
Measles,*	340	445	520	490		

<sup>\*</sup> Measles is not notifiable.

#### THE

### GLASGOW MEDICAL JOURNAL.

No. II. FEBRUARY, 1897.

### ORIGINAL ARTICLES.

### NOTES ON A CASE OF HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY.<sup>1</sup>

By JOHN EDGAR, M.A., B.Sc., M.B., F.F.P.S. GLANG., Professor of Midwifery, Anderson's College Medical School; Surgeon, Samaritan Hospital for Women.

THE case which I wish to describe to you is an example of the rare disease which was at first confounded with acromegaly, but was afterwards (in 1890) diagnosed by Marie, the discoverer of acromegaly, as a distinct disease, and given by him the descriptive but rather clumsy name of hypertrophic pulmonary osteo-arthropathy. The two diseases are similar only in this, that both present enlargement of the hands and feet, and that in both there is frequently kyphosis of the vertebral column, but it does not require any very close scrutiny to detect marked differences between the two troubles.

Mrs. S., æt. 72, has never been out of Scotland, and has lived in Glasgow and its neighbourhood for the last forty-seven years. She married when 29 years of age, but has been a widow for the last thirty-six years. She has had four children,

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No. 2.

<sup>&</sup>lt;sup>1</sup> Read before the Glasgow Medico-Chirurgical Society on 27th November, 1896.

one of whom died of enteric fever; the other three are still

living and healthy.

Her family history is good. Her father died at 65, from some gastric complaint; her mother at 83, from pleurisy. Her maternal grandfather and granduncle lived to the age of 96 and 97 respectively. She had four brothers, but no sisters; two of her brothers are living and well, one 75 and the other 69 years of age; of the other two, one died in infancy, and the other when a young man, of what the medical attendant termed "intermittent fever," but which was most likely enteric fever. Several members of the family, including Mrs. S., suffered from it at the same time.

None of her people has, to her knowledge, suffered from

tuberculosis nor rheumatism.

Patient has always been a healthy, vigorous woman of good habits. She has not been addicted to alcoholism, and I can find no evidence of her ever having suffered from any venereal disease. The menopause was reached at the age of 39, since which time there has been no vaginal discharge of any kind. Until the onset of bronchitis eleven years ago she was remarkably free from trouble. Her only illnesses previously were what was presumably enteric fever when 21 years of age, and an attack twenty-seven years ago of erysipelas of the left ankle, which was incised and resulted in the formation of the cicatrix seen in the photograph of the foot. At first her bronchitis troubled her only in the winter months, but for the last three years she has never been quite free from it, and has had to lie in bed for several months at a time.

She has never been troubled with rheumatism, unless an attack of pain in her left shoulder, which lasted for four or five weeks in February and March, 1896, and resulted, according to her statement, from sleeping in a damp room, might

have been regarded as such.

In August, 1896, Mrs. S. sent for me, complaining of pain and tenderness in the bones and joints of all four limbs, and it was then that I first noticed the enlargement of her hands and feet. I had not seen her since May, at which time I had not noticed anything remarkable about the appearance of her extremities. The patient's own statement was that, towards the end of June, she noticed that she was getting awkward in fine manipulations with her fingers. At this time and during July she observed her hands and feet enlarging, and began to complain of severe pain in them as well as in the arms and legs. Owing to my absence from home, however, she neglected sending for a medical man. During August and September

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the pain continued intermittently, and the hands, feet, and lower ends of legs and forearms continued to increase in size. In October the swelling remained somewhat stationary though the pain continued; but, during the course of the present month, the swelling of all the parts, with the exception of the terminal phalanges of the fingers and toes, which have become more bulbous, has steadily diminished, and the pain has almost entirely subsided. At first there was slight cedema on the dorsal surface of the right hand and left foot, which have all along been more hypertrophied than the other two extremities, but there has not been any trace of this for the last two months.

During the course of the present year (1896) there has been a gradually increasing kyphosis of the cervical and upper dorsal vertebræ.

Patient is very weak. She can sit up and can lie on either side, but cannot assume the dorsal recumbency, nor can she move without assistance. Her face is sallow and thin, but it presents no deformity of any kind, no prognathism, no hypertrophy of the lips, tongue, ears, nor jaw. The nose is thin, and does not present the "clubbing" spoken of by Godlee. The neck is scraggy, and the larynx normal. The hair of her head is scanty, especially on the vertex. There is marked kyphosis of the cervical and upper dorsal vertebræ; the lower dorsal and lumbar vertebræ are also curved with the convexity posteriorly, but with this difference that they can be straightened at will, although with some difficulty.

Except in the soles of her feet she does not perspire; these, however, are almost constantly covered with a copious secretion of sweat. Her temperature, taken morning and evening, is normal, though for a fortnight lately, during an exacerbation of her bronchitis, it varied from 97° to 98.6° F. in the morning

up to 99° to 100° F. in the evening.

Patient's intelligence is above the average, and her memory is good. She has never had any headaches, and sleeps well except when troubled with her cough. Sensation is perfect in every part. There are no tremors, no paralysis, and no want of the power of co-ordination. Her speech is normal. The eyesight has been defective for the last twenty years, and there has been some deafness for the last ten years.

The heart sounds are weak, but no murmurs can be heard. The area of cardiac percussion dulness is normal. The pulse

is weak, and averages 72 per minute.

There is no pain in the chest, and the breathing is not laboured. Cough is very troublesome, and is accompanied

with a copious, frothy, muco-purulent spit, which has at no time been fœtid. There has never been any hæmoptysis. Except for the kyphosis of the cervical and upper dorsal vertebræ, there is no alteration in the shape of the chest. The percussion note is normal; there is none of the retro-sternal dulness which was described by Erb. There are numerous bronchitic râles all over the chest, but more especially at the



Photograph of right hand compared with that of patient's daughter, 12th October, 1896.

upper part of the right lung posteriorly. There is no bronchophony. The sputum was very kindly examined for me by Dr. R. M. Buchanan, who has sent me the following report:—
"I have examined the specimen of expectoration from your patient, Mrs. S., collected from 6 A.M. on the 9th till 6 A.M. on the 10th of November, and measuring 10 oz. The surface is covered by a very thick layer of whitish, viscid froth. There is no separation into layers; shreddy, greenish, purulent masses being distributed in about an equal amount of slightly opaque mucous fluid. Under the microscope a large number of capsule

cocci is seen among other species. The bacillus of tuberculosis is not found. The sputum, I may say, has the general characters of that in acute bronchitis."

Tongue clean. Appetite poor. Occasionally some pain after food, so that patient requires to be cautious in what she eats. Constipation. No flatulence. No vomiting. Hepatic percussion dulness normal.

The hands are deformed and greatly hypertrophied, the enlargement being confined almost altogether to the bones. There is no ædema. The skin is not thickened, and is of a greyish tint. On the palmar surface it is smooth and velvety to the touch, but on the dorsal surface it is normal in consistence. Within the last few weeks patches of dark pigmentation have appeared, chiefly on the dorsal surfaces of the proximal interphalangeal joints and along the ulnar edges of the hands, but also over the metacarpo-phalangeal joints and elsewhere. The terminal phalanges are entirely free from this dark pigmentation, but are instead of a pinkish tint; this tint is most marked at the distal extremities of the nails. There is no abnormality of sensation in any part of the hands.

The fingers are very much thickened and deformed. The terminal phalanges are distinctly bulbous and hyper-extended, but the thickest part of the fingers is at the proximal phalanges. The fingers taper rapidly from the proximal to the distal interphalangeal joints. On palpating the fingers the thickening is felt to be due apparently to hypertrophy of the bones, and this thickening is more marked at the diaphyses than at the joints. The enlargement of the fingers, as of the other parts, has markedly diminished during the last three weeks, but the terminal phalanges, while becoming distinctly more bulbous and hyper-extended, have retained the same circumferential measurements. The measurements of the middle finger of each hand on 6th October and 26th November were as follows:—

				RIGHT HAND.		LEFT HAND.	
				6th Oct.	26th Nov.	6th Oct.	26th Nov.
Circumference of	first phalanx, first joint, .	•		Ins. 37 37	Ins. 3½ 3½	Ins. 38 31	Ins. 3½ 3½
?? ??	second phalanx, second joint, . third phalanx,		•	31 23 21	3 2½ 2½ 2½	31 31 27 24	3 8 2 8 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2

Each hand measures  $7\frac{1}{2}$  in. from the wrist to the tip of the

middle finger; the middle finger itself measures 43 in.

The nails are very markedly altered. Besides having the rosy tint at their peripheral extremities, before mentioned, they are striated longitudinally, are extremely brittle, and are very much widened, as well as curved longitudinally and transversely. They bend over the tips of the fingers. These characters are now much more pronounced than at the time when the accompanying photograph (see p. 84) was taken. At present the nails of the index and middle fingers measure each  $\frac{1}{4}$  in. in width.

The carpo-metacarpal region of the hands has also become greatly thickened and widened, though within the last three

weeks it has considerably diminished in size.

	RIGHT HAND.		LEFT HAND.	
	6th Oct.	26th Nov.	6th Oct.	26th Nov.
	Ins.	Ins.	Ins.	Ins.
Circumference of hand at metacarpo-phalangeal joints of fingers,	98	87	87	81/2
Circumference of hand at metacarpo-phalangeal joint of thumb,	101	10 <del>1</del>	9§	91

Owing to atrophy of the thenar and hypothenar eminences,

the palms of the hands are flattened.

Wrist and forearm.—At the lower end of each forearm there is an abrupt enlargement due, as made out on palpation, to thickening of the lower ends of the radius and ulna. The bulging is in both directions, both antero-posteriorly and transversely.

					RIGHT ARM.		LEFT ARM.	
					6th Oct.	26th Nov.	6th Oct.	26th Nov.
Circumference of middle of a			•	•	Ins. b∦	Ins.	Ins. 78 84 78	Ins. 71
,, above malleoli			•		8#	81	8 <del>1</del>	71
,, below malleoli	, .	•			5# 8# 8#	74	7 <del>8</del>	7k 73 78

The elbows and shoulders do not seem to be changed.

The feet.—The changes here are much the same as in the hands. The toes are thickened, and have bulbous terminal phalanges. The nails are longitudinally striated, brittle, widened, and curved longitudinally and transversely. The nails of the two great toes are each 1½ in. in width. These characteristics are now, as in the case of the hands, more marked than when the photograph was taken.

There is no cedema. Sensation is normal. The skin on the



Photograph of left foot, 12th October, 1896.

dorsal surfaces of the two proximal phalanges of each toe, and along the outer and inner borders of each foot, is strongly pigmented. One or two faint patches of pigmentation are also seen on the dorsum of the tarso-metatarsal region. The soles of the feet perspire very freely.

The tarso-metatarsal region is much enlarged, though not so markedly so as in October. The ankles are also much thickened, and the hollows filled out.

	RIGHT FOOT.		LEFT FOOT.	
	6th Oct.	26th Nov.	6th Oct.	26th Nov.
Circumference of foot at metatarso-phalangeal	Ins.	Ins.	Ins.	Ins.
joints,	1114	101	111	101
Circumference of foot at tarso-metatarsal joints, heel.	148	10½ 13∯	11 <del>8</del> 14 <del>1</del>	10½ 13∯
" amble at level of mellecti	128	108	121	111
log 4 in above mellecli	101	97	107	10
,, leg 8 in. above malleoli, .	121	107	12 7	111

The knee-joints are hypertrophied, and are swollen with synovial effusion. The hip-joints are apparently normal.

The bones of all four extremities, but more especially of the hands, feet, wrists, and ankles, are tender on pressure. This, however, is not so marked as before the diminution in the thickening set in. There is no creaking in the joints, and no nodosities. As regards movement, both active and passive, there is distinct limitation in the fingers and toes, and less marked limitation in the wrists and ankles. The fingers cannot be made to touch the palms, though their movement is now much freer than in October. The elbows, shoulders, knees, and hips can be flexed and extended to their full extent, but the patient states that she feels these joints slightly stiffer than normal.

Pathology.—There have been very few post-mortem examinations in cases of hypertrophic pulmonary osteo-arthropathy. Until there have been several more we shall necessarily remain a good deal in the dark as regards its true pathology. Those which have been made, viz., by Rauzier, Thérèse, Bamberger, and Thorburn, mainly go to prove that the essential lesion is an osteo-periostitis. Thorburn, in a post-mortem account of of one of his cases, reported in the British Medical Journal of 3rd October, 1896, says:—"The limb bones were covered with a finely-porous layer of subperiosteal bone; their compact tissue being sclerosed to a greater or less extent in different bones, and their medullary cavities encroached upon by the new bone." "The primary and essential lesion is clearly a widely-spread and very chronic osteo-periostitis, affecting ultimately most, if not all, of the bones, but commencing in the

extremities, and always most marked at the distal ends of the limbs. The diaphyses are attacked rather than the epiphyseal ends of the bones. The joint lesions are doubtless secondary." He also describes cartilaginous erosions which, he says, are "clearly atrophic." In the case of Mrs. S. I had, previous to reading this report by Thorburn, made up my mind that the cause of the swelling was periostitis, and for the following reasons:—(1) The thickening of the bones, made out on palpation, could not be due to new formation of bone, because the enlargement had developed too rapidly for this to have taken place; (2) in the skiagraphs of the right hand and left foot, which Dr. Faulds had kindly taken for me, it was apparent that the bones were of normal thickness. The only conclusion that could be arrived at, therefore, was that the thickening was periosteal, that is to say, that the condition was one of subacute periostitis, and this at once accounted for the pain and tenderness of which the patient complained.

What exactly is the cause of the osteo-periostitis has not yet been determined. Marie and the French school are of opinion that it is due to the action of toxins, the result of some lesion of the respiratory apparatus, and that these toxins have an elective action affecting chiefly the bones and joints of the extremities, in the same way as the uric acid of gout has an elective action on very similar parts. Marie fails to explain, however, why, while the pulmonary conditions, which he describes as entering into the causation of the osteo-arthropathy, are so very common, the osteo-arthropathy itself is such a rare Thorburn takes some pains to prove that the affection is really a chronic tuberculosis of benign type. In my case I should find it hard to believe that such is the cause. Godlee, again, throws out the suggestion that the cause may be syphilis. With regard to this, all I can say is that I can find no evidence of my patient ever having suffered from venereal disease of any kind.

In the history of the case we are considering, besides the fact that to a long-standing chronic bronchitis there has been added a periostitis, or possibly an osteo-periostitis, causing enlargement of the hands, feet, and lower ends of both forearms and legs, it is also a point of some interest that it is secondary to this—secondary, at least, in point of time—that the various tropho-neuroses have arisen, viz., the clubbing of the fingers and toes, the striation and brittle condition of the nails, the pigmentation of the skin of the hands and feet, the sweating of the soles of the feet, &c.

Diagnosis.—With regard to diagnosis I think I am fully justified in classing the case as one of hypertrophic pulmonary osteo-arthropathy. The long-standing bronchial trouble, the changes in the nails, the clubbing of the fingers and toes, with the pink colouration of their distal phalanges, the thickening of the digits, the flattening of the thenar and hypothenar eminences, the deformity of the wrists and ankles, the palpable thickening of the bones, and the absence of head symptoms together make up a picture which I venture to think is characteristic.

There are, however, some special points in the case to which,

I imagine, it is worth while to draw your attention.

1. The sex. In only three of the cases, which I have come across in my reading, has the affection occurred in the female.

2. The onset and progress. In almost all of the cases so far reported the disease began insidiously and finally came to a standstill. There has not been, as a rule, the rapid enlargement, with pain and tenderness, which I have noted, and in only two cases have I seen a record of subsequent diminution of the swelling. There is one case, however, reported by Saundby in the Illustrated Medical News for 2nd March, 1889, under the heading of acromegaly, though a consideration of the report proves that it is not so, but really a case of hypertrophic pulmonary osteo-arthropathy, in which, as in the case of Mrs. S., the swelling began with pain, and reached its maximum in a few weeks. This patient died about five months after the onset, and Saundby found at the necropsy a sarcoma of the lung with "caseating pneumonia" infiltrating the neighbouring lung tissue. Unfortunately, he did not examine the bones of the limbs.

3. The velvety feel of the palmar surface of the hands. I do not find this mentioned by any observer.

- 4. The pigmentation. This, also, has not been noted, except in the case reported by Saundby, already quoted. He observed that the skin of the hands was discoloured with patches of yellow pigment. In my case the pigmentation is dark.
- 5. The shape of the fingers. Souza-Leite in the original description of hypertrophic pulmonary osteo-arthropathy states:—"The size of the fingers is specially noticeable at the last phalanx. The latter is considerably swollen and bulbous, to such an extent that both relatively and actually it is the most hypertrophied of the three." This description certainly does not correspond with the description of the fingers in my case. It is noteworthy, however, that during the last three

weeks, while the other parts have been diminishing in thickness, the terminal phalanges have become more bulbous. It is the proximal phalanges, however, which are still the most hypertrophied of the three. Thorburn, in differentiating osteoarthropathy from the Hippocratic hand of pulmonary and cardiac diseases, states that the fingers differ from the ordinary clubbed fingers in that the main enlargement is not terminal.

6. The carpo-metacarpal region. Souza-Leite says:—"It does not depart perceptibly from the dimensions or form of the normal hand beyond a little hypertrophy of the heads of the metacarpals." In my case the carpo-metacarpal region is undoubtedly greatly enlarged, though here also there has been

a marked diminution within the last three weeks.

7. The situation of the kyphosis of the vertebral column. Kyphosis is not present in all cases. Marie stated, however, as one of the points of distinction between acromegaly and the disease under consideration, that in the former the kyphosis involved the cervical and upper dorsal, whereas in the latter it involved the lumbar and lower dorsal vertebræ. In this, also, my case is an exception to the rule, if this be the rule.

That the case is not one of acromegaly will be obvious to anyone. The preceding chronic bronchial mischief, the rapid onset, the shape of the fingers and characters of the nails, the absence of hypertrophy of the soft structures of the hands and feet, the absence of hypertrophy of the ears, nose, lips, tongue, lower jaw and larynx, and the absence of headache sufficiently

differentiate it from acromegaly.

Treatment.—Very little can apparently be done in the way of treatment. Godlee claims that in one case, where symptoms similar to those found in osteo-arthropathy resulted from an empyema, the swelling entirely disappeared when the empyema was cured. One case, which has been reported, was cured by antisyphilitic treatment on the supposition that it was due to syphilis. In my own case, while also treating the bronchitis, I have ventured to give iodide of potassium, not because I think the patient is syphilitic, but because of the periostitis. Whether this be the reason or whether the affection is taking its natural course, I do not know, but it is only since beginning the drug that the diminution in the swelling has occurred.

# CASES FROM THE GLASGOW ROYAL INFIRMARY DISPENSARY.

By T. K. MONRO, M.A., M.D., Assistant Physician to the Infirmary.

CASE 1. Raynaud's disease with gangrene of the ear.

On the 28th April, 1896, a labourer, aged 35, came to the Dispensary complaining of a feeling of intense cold in the left This sensation was constantly present, though much less severe in warm than in cold weather. On the day before his visit the pain was so intense that he had to hold down his cap over the affected part. The right ear had felt cold, but not painful, for a couple of months past. At the tip of the left ear there was a distinctly gangrenous portion half an inch long, and the surrounding skin was livid and somewhat swollen. The anterior margin of the right ear was slightly blue in colour. The ailment dated back for more than a year to the severe frost in the beginning of 1895. At that time the fingers were rather painful, and the skin came off the pulp of two digits (he thought) in each hand; but these parts recovered before long, whilst his toes never troubled him at Patient could suggest no cause for his trouble except the severe cold. His general health was good, and there was no history of swelling of the feet, blood in the urine, malarial fever, or residence abroad. It was noted that the right pupil was slightly larger than the left.

CASE 2. Chorea with Raynaud's disease—Local asphyxia of the extremities with multiple superficial ulcerations of the feet.

A schoolboy, aged 10, came to the Dispensary in November last on account of St. Vitus' dance, from which he had suffered for three years, with temporary improvement in summer. Even as a small boy he seems to have got blue with cold too readily. Last winter, however, and ever since, this affection had been more definite, though not so marked during the summer. The hands and lower halves of the fore-arms, the feet, and the legs almost up to the knees were livid and cold, but the face and ears had not been observed to be affected. The hands were habitually swollen as well as blue. Last winter (1895-96) numerous ulcerations took place on both feet about the ankles and toes. Blebs appeared and burst, and the resulting ulcers took perhaps six weeks to heal. Altogether,

this process went on for about three months. Some of these local lesions were of considerable size, and several scars which resulted were clearly recognisable at the time of the visit. No distinctly black (gangrenous) appearances had been seen. Even during the period of ulceration, patient seems to have been quite free from spontaneous pain. The digits did not show any tapering towards the points. No cardiac murmur was heard, and patient was not subject to cough. He was in Belvidere Hospital with scarlet fever two years ago (i.e., after the onset of chorea).

Remarks.—In the American Journal of the Medical Sciences for November, 1896, there is an article by Osler on "The Cerebral Complications of Raynaud's Disease." Of these, hysteria appears to be the most frequent. Among the others are various forms of mental disease, epilepsy, transient aphasia with or without transient hemiplegia, and severe and persistent headache. In another group of cases, the association has been with chronic structural disease of the central nervous system—hydrocephalus, syringomyelia, or tabes. Of the three instances which Osler has found recorded of the association with hydrocephalus, two were in adults, whilst the third—in a very young child—was a curious and complicated case recorded some years ago by the writer of these notes.

Chorea does not appear in Osler's list, but he quotes the case of a girl who, immediately after "what appears to have been an attack of chorea of considerable severity," began to suffer from hysterical attacks, a painful swelling behind the left ear, and a red, swollen, and painful condition of the legs between knee and ankle only. This case is, of course, very doubtful, but Osler suggests that it may possibly be related to Raynaud's

disease.

CASE 3. ? Injury of both brachial plexuses.

This case was transferred to me from the Surgical Dispensary by Dr. Rutherfurd. Patient was a man of 27, who had for five years been addicted to alcoholic excess. He enjoyed good health, however, until the onset of his present complaint. He was drinking whisky in a bar, but was already so drunk that he had no personal recollection of what happened. Five minutes after he ceased drinking, he rose from his seat and fell sideways, remaining insensible thereafter for four hours. He

<sup>1 &</sup>quot;On a complicated case of Raynaud's disease: local asphyxia with gangrene, occurring at a very early age—congenital disturbance of general cutaneous circulation—congenital hydrocephalus—tracheocele," Glasgow Medical Journal, April, 1894.

had been a total abstainer since then. On regaining consciousness, he found himself in bed, with his left arm almost completely paralysed, and his right arm affected in the same way, though not so severely. Thus, he was unable to separate the digits of the left hand from one another, and he could scarcely flex them at all. In the case of the right limb, the shoulder appears to have suffered more than the digits. The left upper limb felt all quite dead, and on the right side there was a feeling of deadness corresponding pretty much in distribution with the loss of power. The doctor whom he first saw treated him with strychnine, and a steady improvement took place. When he visited the Dispensary, the "deadness" had been absent for a week, but there was still some pain in the affected parts, especially at night. There was some tenderness of the left deltoid, and pain on pressure in front of each shoulder-There was great loss of power of the left deltoid, and very considerable loss in the case of the right. The pectorals. trapezii, and latissimi were not obviously affected. There was a suspicion of weakness in the flexors of the elbow, and of wasting in the hypothenar region. Both hands, however, had now practically regained their power. No tenderness was discovered in the nerve-trunks of the arm. The knee-jerks were both exaggerated, but there was nothing else in the lower limbs to suggest a lesion of the spinal cord; there was no ankle clonus, or ataxy, or derangement of the pupils. Apart from alcoholism, a number of the ordinary causes of multiple neuritis, as due to a blood state, could be excluded. There was no history of lead-poisoning, diphtheria, rheumatism, influenza, or enteric fever. Patient had a first attack of gonorrhoea nine months before, but he had no hard sore.

Remarks.—In the mode of onset, and in the character and distribution of the symptoms, this case is destitute of any resemblance to alcoholic neuritis. The sudden onset, the difference in the degree of involvement of the two sides, and the limitation of the symptoms to the upper limbs seem, when taken together, to exclude the other forms of the entity called multiple or peripheral neuritis. The severe affection of the upper limbs, and the escape of the lower limbs, sphincters, and trophic centres, together with the mode of onset, exclude the common varieties of myelitis. The prolonged involvement of sensation in the palsied limbs, and the absence of distinct muscular wasting in spite of the severity of the palsy, must make us put aside the diagnosis of anterior poliomyelitis—in itself uncommon at this patient's age—in favour of a theory at once simpler and much more probable. No information was

obtained at the Dispensary as to the mode in which patient was transferred from the bar to his bed, but it is very likely that he was carried in such a way that undue tension was put upon the nerves that enter into the brachial plexus on either side, so that nerve degeneration ensued. The facts are all consistent with this view. Had it not been for the rapid recovery, we might have supposed that the nerve-trunks had been actually torn across. The latter serious accident is sometimes caused on one side by dislocations or violent wrenches of the shoulder, but a mere fall upon the shoulder, or a direct blow upon it, without any fracture or luxation, may be quite sufficient. A certain localisation is possible in these unilateral cases, for in a considerable proportion the pupil is small on the side of injury; this suggests detachment of the roots from the spinal cord rather than rupture of the trunks distal to the junction of the anterior and posterior roots.1

In the present case, there was a lesion on each side, so that the pupils could not be compared. If only one arm had been palsied, we should have blamed the fall at the bar, but the facts of the case compel us to resort to some such theory as

that which has been proposed.

CASE 4. A spastic type of chorea.

The detailed note is dated 17th April, 1896, exactly five weeks after patient's first visit to the Dispensary. A girl, aged 14, a lace-darner, began to suffer in the right arm and leg about five weeks ago. The leg was stiff, but never painful; the stiffness was such that the limb dragged along the ground in walking, and she therefore kept to bed for a week. For a fortnight the leg has been about as well as ever, and there is nothing abnormal in her gait. The right arm was at first merely stiff, but after a couple of weeks it became painful at the front of the elbow. For the last three weeks, the right middle finger and forefinger have become spasmodically and painfully flexed almost every day, perhaps twice in one day, and for an hour at a time. The pain at the elbow is often absent and appears to come on in association with the spasm of the fingers. Patient cannot raise her right shoulder so high as her left, and in the course of the examination a strong tendency to spasm is observed in the biceps, supinator longus, and neighbouring muscles, the flexure of the elbow being at the same time tender on pressure. The grip of the right hand is considerably less powerful than that of the left. When the hand is left at rest the digits go through slow, irregular,

<sup>&</sup>lt;sup>1</sup> For cases of this kind see Bowlby, Injuries and Diseases of Norves.

spontaneous movements. No muscular atrophy is discovered. The right knee-jerk is rather more active than the left. The optic discs are hyperæmic, but not inflamed. No headache spontaneously or on local pressure; no vomiting; no fits. Patient had measles at 5 years of age, but never had scarlatina, rheumatism, St. Vitus' dance, or any other illness. Nothing distinctly abnormal is discovered with regard to the heart.

Treatment during these five weeks had been mainly symptomatic and sedative, and had been of no avail. On the present occasion, after the case had been thoroughly gone into afresh, and the diagnosis was still uncertain, one of the students, who had remained behind in the side-room of the Dispensary, came and reported to me that she had observed some twitchings of the left side of the face. Arsenic was thereupon prescribed, and the result was a speedy and complete cure. On the 8th May, it was noted that pain was quite gone from the arm, even

on pressure, and the spasms had also ceased.

Remarks.—Involuntary movement, muscular weakness, and muscular rigidity are three symptoms belonging to the group that depends on impaired functional integrity of the upper segment of the motor path. They are, of course, characteristically met with in cases of structural lesion of the pyramidal tract as in common hemiplegia. But they are also found in two diseases which are due not to structural, but to functional, or perhaps rather nutritional, changes in the cortex (upper end of upper motor segment). Paralysis agitans and chorea, occurring one in the earlier and the other in the later period of life, have a certain kinship to one another, the former being commonly hemiplegic in its mode of commencement and extension, whilst the latter is frequently hemiplegic in its distribution throughout its entire course. The three symptoms alluded to are regularly present in paralysis agitans, two of them being implied in its Latin and English designations. In the case of chorea the abnormal movements are so obtrusive a symptom in comparison with the others that there is danger of the latter being overlooked, although weakness at any rate is now generally known as a frequent symptom. In exceptional instances, weakness may be practically the only symptom (a variety of the disease which Dr. Gowers has proposed to call "paralytic chorea"), and the diagnosis may then be somewhat The age of the patient, the limitation of the weakness to one arm, and the occasional manifestation of slight choreic movements in the affected limb or in other parts may furnish the necessary clue.

Similarly we can understand that in some instances rigidity

(the third of the three symptoms referred to) may be met with as an almost isolated symptom, and if this be so, the designation "spastic chorea" might be employed, if a separate name were desirable.

In the case narrated, painful spasm was the leading though not the only symptom, and it was the opportune observation of an inconstant twitching of the mouth which led to the employment of what seems to have been the specific required.

Chorea is seldom associated with pain. As Gowers remarks, "the muscular spasm may cause fatigue, but occasions no sensation of pain." This writer states that he has met with only two cases in which there was pain in the limbs at the onset. In one the choreic movements commenced in each limb of the left side at the same time as the pain. In the other there were intermittent neuralgic pains for some weeks before the movements began.

In the Collective Investigation Committee's Report, mention is made of a boy of 6 (Case 150), who, in the course of a mild attack of chorea, suffered from tonic painless contraction of the

extensors of the right hand.

It would appear therefore that in none of these published cases was the pain due to the violence of tonic spasm.

PERITONITIS IN ENTERIC FEVER WITH REGARD TO SURGICAL INTERFERENCE: BEING A STUDY OF FORTY-SEVEN CASES FROM THE RECORDS OF BELVIDERE FEVER HOSPITAL<sup>2</sup>

> By J. FRANCIS R. GAIRDNER, M.B., Resident Assistant Physician, Belvidere Fever Hospital.

Summary.—The clinical and pathological reports of 47 cases have been compared with the accounts of cases in which laparotomy has been successful. As a result, 23 cases (49 per cent) have been classed as more or less favourable with

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 Published by permission of Alexander Johnston, M.D., D.P.H.,
 Superintendent of the City of Glasgow Fever Hospital. The writer is indebted to past and present members of the medical staff of Belvidere for the excellent records on which this paper is founded, and particularly to his colleagues, Drs. Watson, M'Harg, and M'Kay, who have permitted the use of three of the four charts published; to Drs. M'Intosh, Love, William Watson, and Tod he is indebted for personal explanations of cases formerly under their care.

regard to surgical interference; and of these, 9 (19 per cent of the whole) as very favourable. An analysis of the cases and a summary of each is given.

• The number of successful laparotomies for perforation of enteric ulcer of the intestine, though still very small, has been steadily increasing; and there has been much recently in medical literature to call the attention of the profession to this subject. It seems, therefore, to be an opportune time to publish the results of a search through the records of Belvidere Fever Hospital for the purpose of collecting cases where an autopsy has shown peritonitis complicating enteric fever. The writer's object has been to estimate, by a consideration of the clinical and pathological reports, how many of these cases might have offered a reasonable opportunity to the surgeon in the light of successful cases already published. All facts, too, likely to be of use to medical men in forming their opinion, or which might assist the operating surgeon, have been carefully sought for.

Forty-seven cases have been thus collected. They occurred

over a period of sixteen years (1880-1896).

There has been no selection of cases, saving only that a very few have been rejected because the record was too meagre to be of value; a very few, also, there is reason to believe, may have been overlooked.

These reservations obviously do not invalidate the claim that these 47 cases are an unselected series, extending over a

number of years.

As a preliminary and guide it is necessary to give a short account of the cases hitherto reported which have recovered from peritonitis in the course of enteric fever after operation. The writer is indebted for most of the references to Mr. Maylard's recent work, where there is also a discussion of the subject and an excellent account of the appropriate technique, with which, of course, this paper will in no way deal.<sup>1</sup>

There are in all 5 cases, excluding 4 in which the diagnosis

was doubtful.

1. Mikulicz, 1884. Four operations, 1 recovery.. These are quoted by Louis, who also collected 8 other unsuccessful cases; and another successful one, by Escher, which must, however, be excluded, the diagnosis being uncertain.

2. Van Hook, 1892. Female, aged 31. Perforation occurred

Le Progrès Médical, 1890, vol. ii, p. 512.
 Annual of the Universal Medical Sciences, 1892, vol. iii, C-101.

<sup>&</sup>lt;sup>1</sup> The Surgery of the Alimentary Canal, London, J. & A. Churchill, 1896.

on seventh day of a mild attack. The operation was performed a few hours later. More than a pint of fluid fæces and exudate was removed, and a minute opening in the small intestine found. There was probably considerable ulceration of the intestine. Recovery. Dr. Van Hook has operated thrice unsuccessfully. In the same article 3 other cases by other surgeons are reported, with good results, but the diagnosis has been doubted by Dr. Barr, of Liverpool, and is not defended by Van Hook himself.

3. N. Senn, 1893.<sup>2</sup> Male, 14. Perforation occurred in the sixth week. When the abdomen was opened, at least half a gallon of liquid fæcal matter and a quantity of gas was let out. The perforation could not be found. Recovery. Two other cases were operated on unsuccessfully by the same surgeon.

4. Netschagen, of St. Petersburg, 1894. This case is referred to by Dr. G. E. Armstrong, but the writer has not been able to find details.

5. Abbe. 1895. Female, 21. Perforation occurred at the end of three weeks, convalescence having begun. The operation was performed two days later, the temperature being 104°, and pulse 140. Advanced peritonitis, a collection of purulent fluid, and a large perforation of lower part of ileum (quarter of an inch in diameter) were found. Recovery.

Dr. G. E. Armstrong (loc. cit.) published a remarkable case where operation was performed at the height of an attack of enteric fever. At the time of publication, twenty days after operation, the temperature and pulse were normal. Unfortunately, however, more recent information shows that this case was not ultimately successful. Five other cases had been operated on in the same hospital (the Montreal General Hospital), but unsuccessfully. Thus, for 5 successful cases published we find 18 unsuccessful.

What, then, is the proportion of cases which recover without surgical interference when symptoms of general peritonitis have set in?

It is difficult to estimate the proportion numerically, but such recoveries are certainly exceedingly rare. Thus:—Todd and Jenner, in a long life of large experience, saw 1 case each;

<sup>1</sup> The Treatment of Typhoid Fever, p. 81, London, H. K. Lewis, 1892. 2 Annual of the Universal Medical Sciences, 1893, vol. iii, C-77.

<sup>3</sup> British Medical Journal, 5th December, 1896, p. 1621. 4 Annals of Surgery, 1895, vol. xxi, p. 362.

<sup>&</sup>lt;sup>5</sup> Collected Essays and Lectures on Fevers, pp. 311 and 484, London, Rivington, Percival & Co., 1893. Jenner's case died later on, and it was then found that the peritonitis was due, not to perforation, but to rupture of a softened mesenteric gland. Jenner, in fact, as is well known, denied the possibility of recovery after perforation of the intestine.

Tweedie, 2; Murchison carefully collected 6 cases, but only 2 were his own.

A fair number of cases may be found in medical literature. reported with more or less accuracy, but it is seldom that an individual experience includes more than one case, while many, of large experience, have seen no such cases, and even doubt the possibility of recovery after perforation of the intestine freely into the peritoneal cavity. Now Murchison, at p. 524 of the second edition of his work on continued fevers, states that in the ten years between the publication of the first and second edition of that work he had attended "more than two thousand cases" of enteric fever; certainly he must have attended even more before the publication of the first edition; so that his personal experience up to that time may fairly be put down as at least five thousand. another place he estimates the occurrence of perforation of the intestine in his cases at a fraction over 3 per cent, so that in about 150 of these cases that accident must have occurred. Two only, as we have seen, recovered.

If, then, the number of unsuccessful laparotomies published be trebled, so as to make sure of including those unpublished, roughly this gives 54 unsuccessful cases and 5 successful cases.

When it is remembered that little selection has been made in the cases operated on (Van Hook's dictum is, "the only contra-indication is a moribund condition of the patient"), it may be claimed that the "prentice hand" of surgery has considerably improved on the very best treatment by other means.

But a glance at the Belvidere cases will show that many are more favourable than any of those described above. In order to represent graphically, however roughly, the relative proportion of favourable cases, the writer has divided them into four classes, as follows. Each case has been classed after

careful separate consideration:—

1. In the first class have been grouped cases in which perforation occurred in a quiescent stage of the disease, or in the course of a mild attack, and in which the autopsy showed very slight affection of the gut. In many of these cases the perforated ulcer was the only considerable ulcer present, and in all of them it was immediately surrounded by sound gut. So many as 9 of the 47 cases (19·1 per cent) seem fairly to come under this category.

2. Cases not quite so favourable, but none less favourable than some of those published, in which laparotomy was actually successful. Fourteen cases are placed in this group (29.8)

per cent).

3. Unfavourable cases, presenting, however, some redeeming features. Many of these cases would certainly be attempted were Van Hook's dictum, before referred to, acted on. Nine

cases (19.1 per cent) are included.

4. Altogether unfavourable cases, 9 (19.1 per cent). There remain 6 extremely interesting cases, in which peritonitis was not due to perforation of the intestine (12.7 per cent). The chances of laparotomy are more difficult to estimate in these cases, and for this reason, as well as for their interest, they will be described separately. Of course, were laparotomy to become a frequent method of treatment several of these cases would undergo it, as it is usually impossible to distinguish them from cases of perforation of the intestine during life. There is every reason to believe that the result would be beneficial in some of them; cf. especially Cases XLIII, XLIV, XLV, and XLVII.

A summary of each case will be given, as being the only way of enabling the reader to form his own opinions. An analysis, however, and discussion of the more important facts will be given, in the first place, under the following heads:—

Age.—A glance through the cases shows what Murchison pointed out in a larger series, viz., that age has little influence on the occurrence of perforation. This he showed by demonstrating that the age incidence of perforation is precisely the same as that of the fever itself.

Sex.—31 cases are males, 16 females. This also agrees with Murchison's observation that perforation is more frequent in males, even when the total death-rate in females is slightly in excess.

Period at which Death occurred.—7 died in the second week; 13 in the third week; 17 in the fourth week; 2 in the fifth week; 3 in the sixth week; and 3 in the seventh week. In 2 the date could not be accurately fixed. Of the 7 that died in the second week, 2 cases died on the eleventh day, 2 on the twelfth, 1 on the thirteenth, and 2 on the fourteenth. The earliest day on which perforation occurred was the ninth day in 1 case; in 3 cases it occurred on the tenth day, but one was a relapse.

It is of more import to know whether the disease was in activity at the time of perforation or whether it was subsiding or quiescent, for in one case the disease may much more nearly have subsided in the third week than in the fifth or sixth

week of another case.

In 23 cases, or nearly half, the disease was in full activity

at the time of onset of peritonitis, while in 24 convalescence

was nearly or quite reached.

Duration of Life after Onset of Peritonitis.—3 cases died in less than twenty-four hours, viz., in eight, twelve, and eighteen hours respectively; 7 other cases died within thirty-six hours.

Thus all but 10 cases lived for at least thirty-six hours (78.8 per cent). Only 10 lived longer than forty-eight hours (21.2 per cent), and only 3 longer than three days, viz., three and a half, five, and eighteen days respectively. In the last 2 cases peritonitis was not due to perforation of the intestine, but apparently to extension of septic infection through the damaged bowel wall.

It may therefore be said, speaking broadly, that in any one case the patient may be expected to live thirty-six hours after the onset of peritonitis, but must not be expected to survive

more than forty-eight hours.

It would seem therefore that the course of acute septic peritonitis is more rapid in enteric fever than under other conditions, where, according to the latest information (Treves),

the duration is from thirty-six hours to seven days.

Character of the Primary Attack.—In 13 cases (27 per cent) it was severe; in 22 (50 per cent) it was an average acute attack; in 11 (23 per cent) it was mild. Of 44 cases where it is noted, diarrheea was a marked feature of the attack in 13, and in 4 of these it was severe, while in 9 a considerable amount of intestinal hæmorrhage preceded perforation, and a slight amount in 2.

Of these 9 cases, 4 are classed as severe, 3 as acute, and

2 as mild.

Mode of Onset of Peritonitis.—The surgeon's chances of success, as he is constantly reminding us, diminish rapidly with the duration of peritonitis, Hence the extreme importance of early diagnosis. That the diagnosis of peritonitis is often very difficult in the course of enteric fever is well known. Nevertheless the difficulty would seem to exist only in a minority of the cases. Thus in 12 (25 per cent) the onset was gradual and more or less obscure, and of these in 4 it was probably undiagnosed before death. In 8, on the other hand (17 per cent), the onset was obvious at once and in some fulminant. In the remaining 27 cases (59 per cent) the onset was well marked, and careful observation would doubtless make the diagnosis in at least twelve hours.

Temperature.—Of 39 cases, in 22 the temperature was considerably raised after the onset of peritonitis, either immediately or early, and in 12 of these it was very much raised. In 8 it is noted as being lowered at the time of onset.

The pulse is invariably quickened, though rarely in the early

stages not very much so.

Symptoms.—Initial shock was only noted in 7 cases. It is certainly much rarer than in acute peritonitis from other causes. This may be due (1) to the seat of perforation being almost invariably at a considerable distance from the solar plexus; (2) to the torpid condition of the patient so frequently to be noted in enteric fever.

Pain was an initial symptom in 26 of 42 cases, in 10 of which it was very severe. It was absent all through or very

slightly developed in about 8 cases.

Rigor is only noted in 2 cases; it is certainly uncommon. In one of these cases (Case XLII), the peritonitis was due to rupture of a softened mesenteric gland. It is noteworthy that in Jenner's case of this very rare occurrence (loc. cit.) frequent and severe rigors occurred for the first thirty-six hours. The rigor in Case XLII was at least twice as prolonged as in the only other case in which this symptom was prominently present. The conclusion, therefore, may fairly be drawn that in any case where rigor is an exceedingly marked symptom the possibility of this condition should be considered.

Late collapse was prominent in more than half the cases. Vomiting and hiccough were prominent in 14 cases, but occurred at the time of onset in 2 only.

Meteorism occurred in about half the cases.

Pathological Origin of the Peritonitis.—In 6 cases (12.7 per cent), as has been seen, the peritonitis was not due to perforation of the intestine. In 1 of these it was due to intraperitoneal rupture of a softened mesenteric gland. In the other 5 cases it seemed to be due to infection through a damaged but unperforated intestinal wall. In 2 cases it was doubtful whether perforation had occurred or not, and in 1 case it evidently had occurred, judging from the feculant fluid in the peritoneal cavity, but the site could not be determined on account of adhesions.

There remain 38 cases in which perforation occurred. In 31 of these the site was in the ileum, in 5 the cæcum, in 1 the vermiform appendix, and in 1 the descending colon. This last was multiple, and was the only case in which more than two perforations occurred. In 4 cases two perforations in the ileum were found.

<sup>&</sup>lt;sup>1</sup> Information on the site of perforation, &c., for much larger series of cases than the present, will be found in Murchison's Continued Fevers of Great Britain; in Von Ziemssen's Cyclopædia, article by Liebermeister; and in the Lancet, 1893, vol. ii, p. 245, article by Francis Hawkins, M.B.

Of the perforations in the ileum, the farthest distance from the ileo-cæcal valve was 5 feet. Of 25, in which the site was accurately recorded, 16 were 1 foot or less from the valve.

Of 24, in which the size is noted, 7 were large (1 in. diameter

or more.) The rest were smaller, and many minute.

Condition of the Intestines.—In 27 cases ulcers were more or less abundant. In 17 cases they were few, but in 5 of these some of the ulcers were deep. In 2 cases there were no ulcers save the one that had perforated, and in 1 case all the other ulcers were well cicatrised. The colon and cæcum seem to have been unaffected in at least 30 of the 47 cases.

Character of the Peritonitis.—In 21 cases the peritonitis may be described as adhesive, with little or no fluid effusion; in 4 of these there was a little feculant matter in the cavity.

In 18 fluid was more or less abundant in the body cavity; in 10 of these the fluid was purulent, 3 being admixed with blood.

In 6 of the 18 the fluid was serous or sero-purulent, 1 being admixed with blood and 1 with fæces. In 2 there was an abundant extravasation of feculant matter.

This leaves 8 cases undefined.

Gas was found in the body cavity in not more than onethird of the cases.

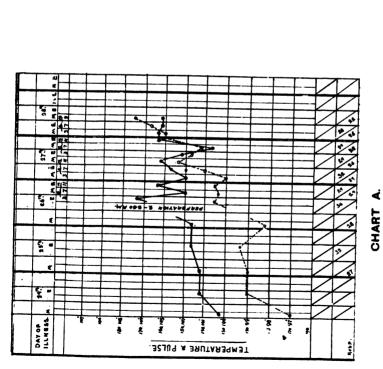
In all cases where the distribution of the peritonitis was noted, its intensity was found to increase towards the pelvis.

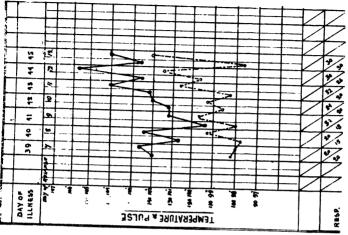
#### SUMMARY OF CASES.

#### Class 1. Very Favourable Cases.

I. Female, age 9. Originally a mild attack with a little diarrhea. A slight recrudescence of pyrexia, accompanied by a little hypostatic congestion of the lungs, took place after admission on the fifteenth day of illness, 104.8° being once reached. By the twenty-second day this had begun to subside, and by the morning of the twenty-sixth day the temperature had not exceeded 101.4° for forty-eight hours (vide Chart A.) All her attendants agree that she was getting on extremely well, when soon after 2 P.M. of the twenty-sixth day she was found in a state of shock. At 3 P.M. temperature was 104.4°, and well-marked peritonitis soon set in. Death occurred at 9 A.M. two days later.

The autopsy showed a small perforation 6 in. above the valve. It proved to be in connection with a small punched-out ulcer. This was the only ulcer in the whole gut. There





# CHART B. (Morning and evening.) Male, age 28.

Perforation on the eleventh day of a relapse. Shows a recrudescence of pyrexia antecedent to the perforation: this is frequent.

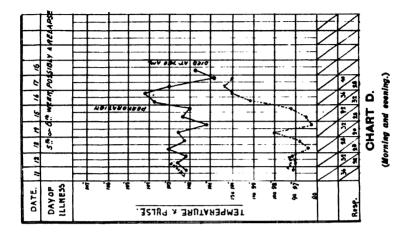
Shows steady increase of pulse-rate after

the occurrence of perforation.

(Norning and evening and four-hourly.)

Case 1.

Female, age 9.



DAY OF TEMPERATURE & PULSE

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Shows late fall of temperature due to collapse.

Male, age 32.

was some cicatricial thickening of the Peyer's patches. The mesenteric glands were enlarged. Peritonitis was well marked, and there was some gas in the cavity. The pelvic cavity contained some ounces of pus.

II. Male, age 17. Originally an average acute case, but unduly prolonged, the temperature reaching the normal only on the forty-fifth day. On the seventy-seventh day, having been for some time quite well, but very emaciated, he got up for the first time. The temperature rose slightly, and peritonitis gradually supervened a day or two later. He died on the eighty-fifth day of illness, six or seven days after the onset of peritonitis.

The autopsy showed a perforation of the small intestine and a thick layer of lymph on the neighbouring peritoneum. The bowel showed numerous cicatrised ulcers, but no other ulceration save at the seat of perforation. There was an adhesive peritonitis, with much lymph exudation, and a collection of pus in the right iliac region. The apices of both lungs

showed a slight quiescent tubercular condition.

III. Male, age 24. Perforation occurred towards the end of third week. This was the diagnosis made on admission, and very probably the accident took place during transit to hospital. He died thirty hours after admission.

The autopsy showed slight ulceration of the ileo-cæcal valve; a few inches higher an ulcer which had perforated, and a deep ulcer some inches higher still, with, however, protective exudation on its peritoneal surface. There was no further ulceration, but a few patches higher up were infiltrated. There was peritonitis with purulent effusion.

IV. Male, age 42. Originally a rather mild attack, complicated, however, by a bad attack of intestinal hæmorrhage in the third or fourth week. This seems to have been quite subdued under Leiter's tubes and opium, and five days later the usual lysis was well advanced when he was suddenly seized with severe abdominal pain. Peritonitis rapidily set in, and he died thirty-seven hours later.

The autopsy revealed a large perforation a little above the valve. Three other ulcers only could be detected, all considerably separated; one of these was deep. There was peritonitis with much lymphy adhesion.

V. Male, age 13. This lad acquired a mild attack of enteric

fever a month after a mild attack of scarlet fever. On the twelfth day he suddenly complained of severe pain, the temperature rose two or three degrees, and there was vomiting and retching. He died forty-two hours later.

At the autopsy three ulcers were found, one a foot above the valve, the others higher. The middle one had perforated. One of the others was deep. There was an adhesive peritonitis

without effusion.

VI. Male, age 30. A mild attack, complicated only by an attack of severe pain and distension on the eleventh day. This entirely subsided, and the temperature had been normal for forty-eight hours when, on the twenty-second day, he began to complain of abdominal pain, which soon became very severe. The case soon assumed the typical aspect of peritonitis, and he died in forty-four hours.

Autopsy.—A small perforation towards end of cæcum was found. The internal aspect of the gut is unfortunately not described, but there does not seem to have been any advanced ulceration. There was a pint of pus in the abdominal cavity, and the coils were much matted together.

VII. Female, age 12. An acute attack originally. She progressed favourably until the seventeenth day, when in the evening she begun to scream with abdominal pain in a quite unmistakable way. She died sixty hours later.

Autopsy.—A minute perforation 4 inches above the valve. There were a few quite discrete ulcers in the rest of the bowel, none deep. The perforation was easily found through a small incision over the cocum. Intense peritonitis, some purulent exudation, and much matting together of intestines.

VIII. Male, age 18. This lad was approaching quite satisfactorily the termination of an acute attack, the pyrexia having almost subsided, when on the evening of the twenty-fourth day he began to complain of pain in the scrotum, which rapidly became severe. Persistent vomiting set in shortly—collapse—death thirty-six hours after first complaint of pain.

Autopsy.—A "pin hole" perforation 6 inches above the valve. This was in connection with the only deep ulcer in the gut. There was moderate tumefaction of the patches for a small distance above valve, and some slight ulceration. A few ulcers in colon. Peritonitis. Much grumous fluid with

yellowish flakes in the pelvis.

IX. Male, age 14. A mild case, with few symptoms beyond pyrexia. On the evening of the eleventh day abdominal pain set in, and the temperature rose two and a half degrees. Facies Hippocratica, thoracic breathing, &c., soon set in. Death two and a half days after onset of pain.

Autopsy.—A "pin hole" perforation a foot above valve. There was "very little ulceration, most marked at the ileo-cæcal valve." The intestine was unaffected 2 feet above the valve. Unusually severe peritonitis. Gas in the cavity. Eight to ten

ounces of a grumous fluid in the pelvis.

CLASS 2. Less favourable cases; none less favourable than some which have been successfully treated by laparotomy.

X. Male, age 39. Primary attack severe—bronchitis, diarrhea, two slight hemorrhages. Complete subsidence. Recrudescence of diarrhea with some pyrexia, thirty-fifth day. Forty-third day—vomiting, acute abdominal pain, increased pyrexia. Symptoms of peritonitis rapidly developed. Death on forty-sixth day.

Autopsy.—Large perforation 5 feet above ileo-colic valve. Numerous ulcers in the intestine; some almost down to the serous coat. They were clean, however, with sloughs

completely separated. Peritonitis without effusion.

XI. Male, age 25. This man was admitted to hospital in the collapse stage of peritonitis. He died the same day. The history pointed to the original attack being mild. Death was on fourteenth day of illness (?).

Autopsy.—Circular perforation of an ulcer 1 in in diameter, nearly 2 feet above the valve. Ileum affected for lowermost 2 feet. Another ulcer down to peritoneal coat, ½ in. from the valve. About 2 pints of turbid sanguineous fluid in the cavity, and some gas. Body well developed.

XII. Male, age 11. Primary attack acute. Moderation of pyrexia on seventeenth day and subsequently. Condition on twenty-second day reported as "good," but on this day the temperature rose a degree higher, abdominal pain set in and rapidly increased "in spite of opium." Death on twenty-fourth day.

Autopsy.—A slough had given way, leaving a large gap about 30 in above the valve. Moderate enlargement of the follicles. About ten ulcers, somewhat deep. Peritonitis; a

little matting in cæcal region; some feculant fluid and gas in the cavity.

XIII. Female, age 36. A rather mild primary attack, the evening temperatures gradually falling to 100°; pulse, 92. "Severe symptoms," not particularised, set in on evening of thirteenth day, when the temperature rose to 103°; pulse, 112. The usual course of peritonitis followed. Death on evening of sixteenth day.

Autopsy.—Small perforation a few inches above the valve. Several patches and follicles in ileum were enlarged and ulcerated. Several of the ulcers were more or less deep. Peritonitis with much soft adhesion. Gas and fæces in the cavity. Spleen much enlarged. Adipose tissue abundant.

XIV. Male, age 38. Primary attack subacute up to fifteenth day. A slight recrudesence of pyrexia then took place; stools became more frequent, with more or less admixture of blood. On twenty-fifth evening there was a little distension, and at 8:30 p.m., on turning over on his side, he suddenly cried out with pain "in the cardiac region;" pressure on right iliac region elicited no pain. Peritonitis rapidly supervened, shock being very marked. Death eight hours later.

Autopsy.—A small perforation on anterior aspect of cæcum. Numerous large areas of ulceration in cæcum and first few inches of colon. A few ulcers in last few inches of ileum. Some of the ulcers as deep as the muscular coat. Recent

peritonitis; much fluid fæces in the cavity.

XV. Female, age 12. Pyrexia considerable and with little remission up to twenty-first day, when a rapid defervescence ensued. Patient reported "much better." Extreme distension set in on twenty-third evening, but no symptoms of peritonitis till next morning, when it supervened with shock, subnormal temperature, retching and vomiting. Death, evening of same day.

Autopsy.—Body cavity distended with gas; intestines collapsed. Lower part of ileum adherent to omentum. An ulcer here must have given way, but which one not determined.

Many ulcers for a foot on either side of the valve.

XVI. Male, age 32. Peritonitis supervened in the remittent period of an acute attack (sixteenth to twentieth day). The temperature rose a degree, the abdomen became rigid and retracted; pain and tenderness. Death ensued in from fifty to sixty hours.

Autopsy.—Numerous ulcers in cæcum and lower portion of ileum. One had perforated, and two were fairly firmly adherent to anterior abdominal wall. Numerous enlarged patches higher up. Peritonitis with much adhesion. Some sero-purulent fluid in right iliac fossa.

XVII. Female, age 14. Peritonitis supervened in the fourth week of an acute attack. Collapse, from which she rallied well, occurred at an earlier stage. The onset of peritonitis seems to have been obscured by previous meteorism, but must have been apparent at least three days before death. Pain, tenderness, frequent vomiting, and lowered temperature were symptoms.

Autopsy.—General purulent peritonitis. No perforation found, but examination noted as "imperfect." "Signs of

enteric indubitable."

XVIII. Male, age 25. An anomalous case all through—at one time suspected to be typhus fever. Delirium and sleeplessness. The attack seemed to be subsiding, the morning temperatures being normal, when he suddenly became wildly delirious. Collapse and stupor soon followed. From this he roused, and passed through another period of excitement. Collapse again came on, and he died two days from the onset of the mania. The temperature was not elevated.

Autopsy.—Numerous cicatrised ulcers in ileum. There was a minute perforation through one of these 4 in. above the valve. Peritonitis with some blood-stained fluid in the cavity.

Remarks.—Anatomically the conditions in this case are most favourable. The difficulties of diagnosis, however, were very great, possibly insuperable.

XIX. Male, age 23. Primarily, this appears to have been an "ambulatory" case, alarm being first aroused by severe intestinal hæmorrhage. This quite subsided on admission to hospital. Four days later peritonitis supervened; pain rapidly becoming severe; temperature raised four degrees. Death two days later.

Autopsy.—Ileo-cæcal valves thickened and ulcerated. Three ulcers in last foot of ileum, but no further affection of gut. The highest ulcer had perforated. One was very advanced. Much adhesive peritonitis with some sanguinolent fluid.

XX. Male, age 15. This boy was suffering from peritonitis with collapse on admission to hospital. He lived for about

sixteen hours afterwards. It was probably the third week of the disease.

Autopsy.—The patches in lower portion of ileum were infiltrated. Some of the lowermost had ulcerated. There were two perforations, 2 inches and 1 foot above the valve respectively. Intense peritonitis, with much serous effusion, and some fæcal extravasation.

XXI. Male, age 7. A sharp attack with severe continued pyrexia. By twentieth day the pyrexia was relaxing, the evening record for the first time being below 102° (101.8°). Peritonitis set in soon after—abdominal pain, soon becoming severe, elevation of temperature. Death thirty-six hours from onset.

Autopsy.—Perforation a little above the valve. Several ulcers above and below the valve. Many were granulating, and some almost healed. Peritonitis very moderate; some clear fluid in the body cavity. Spleen not much enlarged.

XXII. Male, age 19. Peritonitis supervened, probably early in third week of a mild attack. The symptoms were vomiting and hiccough, hard undistended abdomen, but no pain or tenderness; temperature little affected. Death fifty-eight hours later.

Autopsy.—Perforation a little above the valve. A moderate amount of ulceration in the ileum. Peritonitis, with much adhesion, and a considerable quantity of fluid.

XXIII. Female, age 17. Peritonitis supervened about the fortieth day of an ordinary attack, the temperature having been normal or nearly so for quite a week. The onset was shown by epigastric pain, and elevation of temperature four or five degrees. Vomiting and collapse symptoms soon set in. Death in thirty-six hours.

Autopsy.—Ulcers were found in the ileum, some healing, others still very deep. One had perforated. Peritonitis with

considerable effusion.

#### CLASS 3. Unfavourable Cases.

In the following 9 cases peritonitis supervened during the progress of a more or less severe attack (except XXV), and the intestines were found extensively affected post-mortem (except XXVII). In none of them, however, was the patient unduly exhausted at the time of onset of peritonitis.

XXIV. Male, age 20. Death resulted from peritonitis on the twenty-eighth day of an ordinary acute attack. Details of the onset are deficient.

Autopsy.—Perforation of ileum near the valve. Both solitary and agminated follicles extensively ulcerated in many cases.

XXV. Female, age 16. A severe attack. About the seventeenth day exhaustion was extreme. Progress thereafter good, so that convalescence had almost begun on twentieth day, the temperature being normal. Between that and twenty-fourth day peritonitis supervened. The onset seems to have been gradual, but details are deficient.

Autopsy.—Multiple perforations, large and small, in descending colon. Very extensive disease of Peyer's patches, many

almost ulcerated through.

XXVI. Female, age 48. Peritonitis indicated by rapid onset of meteorism, and general aggravation of symptoms set in on fifteenth day of an ordinary acute attack. Death two days later.

Autopsy.—There were two abscess cavities shut off from the general cavity of the peritoneum. The one was in connection with the right lobe of the liver, the other was in the right lilac region. This communicated with a perforation 2 feet above the valve, and contained two pieces of limestone and a piece of bark. It was through this abscess that the peritoneum had become infected. The lower 2 or 3 feet of ileum showed numerous ulcerated and enlarged patches.

XXVII. Male, age 32. Peritonitis supervened in the stage of continued pyrexia on the fourteenth day, the case being an acute one. The onset was indicated chiefly by pain, but the condition became obvious in a few hours. Death in twenty-four hours.

Autopsy.—In the last foot of ileum there were about half a dozen ulcers, considerably advanced. There was a minute perforation nearly a foot above the valve. Much purulent exudation on surface of mesentery and intestines. Some sanguineous fluid and fæces in the peritoneal cavity.

XXVIII. Male, age 21. An acute primary attack. Sudden onset of acute pain on sixteenth day; other symptoms of peritonitis rapidly developed. Death forty-eight hours later.

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Autopsy.—A large ragged perforation a few inches above the valve. Six or eight feet of ileum ulcerated. Intestines congested and covered with flaky pus.

XXIX. Male, age 13. Onset of peritonitis somewhat early (said to be tenth or eleventh day) in an attack of a subacute character. Details of onset deficient.

Autopsy.—A large perforation of ileum, the lowermost 12 inches of which were covered with ulcers. Adhesive

peritonitis.

XXX. Male, age 14. An acute primary attack, accompanied by considerable emaciation. Little abatement of pyrexia when peritonitis supervened in the third week. The patient was found in a state of shock, and died twenty-four hours later.

Autopsy.—A pin-head perforation in connection with a large oval ulcer nearly a foot above valve. Numerous ulcers in the ileum, and two particularly large ones near the perforation.

XXXI. Male, age 19. Primary attack severe. Lysis sixteen to nineteen days. A recrudescence of pyrexia then occurred, accompanying a gradual onset of peritonitis, which was quite manifest on the twentieth day. Death on early morning of twenty-second day.

Autopsy.—Two large perforations of ileum. The intestines contained dark hæmorrhagic motions. Numerous ulcers, some

quite down to serous coat.

XXXII. Male, age 14. A severe attack. Diarrhoea set in on third day, soon becoming urgent. Severe abdominal pain set in on fifth day, and was very persistent. Early on tenth day there was an exacerbation of pain with vomiting, and the case rapidly assumed the aspect of peritonitis. Death, 1 A.M. on twelfth day.

Autopsy.—Perforation of ileum. Enlargement and ulceration of patches for an average extent of ileum. Some ulcers down to serous coat. Intestines much matted together and

covered with a thick layer of lymph.

Remarks.—The medical man in charge, in the light of both clinical and post-mortem observation, came to the conclusion that there had been a peritonitis by extension from fifth day onwards, perforation occurring subsequently on the tenth day.

#### CLASS 4. Very Unfavourable Cases.

In these 9 cases, which need not be particularised, perforation of the intestine occurred when the patient was suffering more or less fully the stress of the primary attack. The autopsy revealed in all cases advanced disease of the intestines.

In 7 of the 9 cases perforation was preceded by more or less severe intestinal hæmorrhage. Of the remaining 2 cases, one was that of a female who aborted in the third week of the fever; it was necessary to insert the hand into the uterus, and collapse followed the operation, from which she did not recover. Peritonitis due to double perforation of the ileum was found post-mortem. In the other, perforation occurred on the seventh day of a relapse; the symptoms were obscure, and death resulted in sixteen hours. The intestines were moderately affected.

Two of the other cases are interesting; one a very protracted and chronic case which in many ways simulated dysentery, the autopsy revealing a very thickened and ulcerated state of the colon. The other is interesting on account of the advanced age of the patient, who was a female, aged 51 years. The disease was exceedingly protracted. There were occasional hæmorrhages, some considerable, from the twenty-sixth day onwards, and the circulation began to fail, as evidenced by cedema of dependent parts, from the twenty-ninth day onwards. Perforation occurred on the thirty-ninth day. The rest of the story is seen in Chart C. Note the severe rigor (ten minutes), a rare occurrence in these cases. There was much ulceration found post-mortem, the ulcers being deep but clean, and apparently healing.

In 4 of these cases the onset of peritonitis was obscure, and

in some undiagnosed.

There remain 6 cases in which peritonitis was not due to perforation of the intestine. In the first it was due to rupture of a softened mesenteric gland.

XLII. Male, age 11. The primary attack was severe, and in the third or fourth week there was a bad intestinal hæmorrhage. Three days later, there being little abatement of pyrexia, he suddenly complained of severe abdominal pain. Shortly afterwards he had a very severe rigor lasting twenty minutes. Frequent retching set in an hour later. The temperature was little affected. Next morning the case was a picture of severe general peritonitis. He died in thirty-six hours after onset of severe pain.

Autopsy.—The mesenteric glands were enormously enlarged, and in the neighbourhood of the excum one had ruptured. Another was on the verge of rupture. There was a sero-purulent peritonitis with considerable effusion beneath the mesentery, which was adherent to the anterior abdominal wall. There were numerous punched-out ulcers in the lowermost foot of ileum, some almost down to the peritoneal coat.

Remarks.—As observed above, the only case in which rigor was anything like so marked as in this case was that of the female who died at the age of 51. The rigor in this case lasted exactly twice as long. Such cases must be exceedingly rare. Murchison refers to Jenner's case (loc. cit.) as the only

one known to him.

In the remaining 5 cases there was no perforation, and the peritonitis seemed to be due to infection through the damaged bowel wall.

XLIII. Female, age 11. Primarily an ordinary acute case. About fourth week symptoms of peritonitis gradually supervened, and she continued in a more or less prostrate condition thereafter. Death nearly three weeks later, on the forty-seventh day of disease. The lower lobe of the right lung became gradually solidified about a fortnight before death.

Autopsy.—"There was no sign of perforation anywhere. Extensive peritonitis; the omentum bound down to intestines by recent lymph exudations, and the loops of bowel everywhere adherent. A considerable quantity of turbid serous exudation." There was considerable ulceration of the ileum for 4 or 5 feet, and a few ulcers in ascending colon. "The lower lobe of right lung was consolidated, but elsewhere the lungs were practically normal."

XLIV. Female, age 21. Peritonitis set in about the eleventh day of a mild attack. The onset was by sudden pain at a definite hour. She was admitted to hospital having suffered from peritonitis for forty-four hours. She died in fifty-six hours from onset of pain.

Autopsy.—No perforation or other manifest origin of the peritonitis. There were the usual signs of peritonitis, and a good deal of grumous fluid in the peritoneal cavity. The microscope showed erythrocytes, leucocytes, epithelioid cells, and micro-organisms. There was infiltration of the adenoid tissue for a considerable extent of ileum, the solitary follicles being especially selected. Three or four shallow ulcers only.

XLV. Female, age 11. A severe case, with much prostration. Reported, however, to be doing satisfactorily on the seventeenth day. On the eighteenth day motions slightly hæmorrhagic. On the evening of the nineteenth day she was restless, and complained of abdominal tenderness. She had a hæmorrhage in the early morning of next day. Collapse and subnormal temperature speedily set in, and she died at 9.50 P.M.

Autopsy.—No perforation found. Peritoneal cavity distended with yellow flakey fluid which escaped with a gush on incision. The only bad ulceration was immediately above the valve, the peritoneal coat in one case being reached. The patches were swollen for a considerable distance up. Colon unaffected.

XLVI. Female, age 17. An attack of some severity. The temperature was abating slightly but steadily towards nineteenth day. Peritonitis probably set in on twentieth day, when there was an exacerbation of temperature and pulse, with abdominal pain; the onset, however, was a little obscure. Death early on twenty-second day (about forty hours after onset of peritonitis).

Autopsy.—No perforation. Moderate peritonitis. Over right lobe of liver there was a collection of soft pultaceous matter. The ileum for some little distance above the valve was thickly studded with ulcers of various depths and sizes. Colon unaffected.

XLVII. Male, age 6. Peritonitis set in on the nineteenth day of a mild attack. Sudden complaint of abdominal pain; temperature, 103.4°; pulse, 144. The peritonitis subsequently assumed such a chronic form as even to suggest the idea of its being tubercular. Death on twenty-fourth day.

Autopsy.—No perforation. "The great omentum is congested, and its surface streaked with pus. The small intestine is matted together, especially in the lower part of the abdomen, . . . and the bladder and intestines glued together. In the pelvis there are 2 or 3 oz. of pus." In the lower part of the ileum the patches were reticulated and a little thickened. A few of them were partially ulcerated.

It is remarkable that in these 5 cases the females largely predominate—4 females to 1 male child.

The average course of the peritonitis was certainly more chronic than in the cases due to perforation — twenty-four hours, forty hours, forty-four hours, five days, and three weeks respectively. The onset was gradual or obscure in 3, but marked by acute onset of pain in 2.

#### Conclusions.

1. The treatment of peritonitis in the course of enteric fever by laparotomy has hitherto had a moderate success. There is every reason to believe that greater success is possible; and in any case the results are better than those of any other treatment.

2. Laparotomy offers a fair chance to about 49 per cent of cases, while 19 per cent of the whole would certainly have a

good chance.

3. Nothing but experience can determine whether results will be better or worse than might be expected prima facie. As there is a good case, at least for attempting surgical interference, it becomes incumbent on the profession to afford every facility for making the attempt. This, of course, applies most particularly to authorities responsible for hospitals in which enteric fever is treated.

### Obituary.

ROBERT BEEDIE ROBERTSON, F.R.C.S. Ed., ARDROSSAN.

Dr. Robert Beedle Robertson, of Ardrossan, Ayrshire, was one of those thoroughly skilful and devoted men who, having a very high and justly-earned local reputation as the leading practitioner of a wide district, seem not to have had the time or opportunity, or perhaps the inclination, to add in a corresponding degree to the literature of medical science. This was not, in Dr. Robertson's case, owing to the want of literary culture or ability, for he was an excellent Latin and English scholar, and had even a remarkable power of keeping himself under the influence of contemporary thought as expressed in literature. But his professional work occupied him very thoroughly, and not being of a very robust constitution, he was never tempted to spend his energies in any way that did not tend directly to the benefit of his patients. For nearly forty years he has been the trusted adviser of a very large number of the wealthier and middle classes, and has also had a large clientèle among the poor, whom he attended without regard to pecuniary remuneration, bestowing on them the same care as on the others, and being in regard to all classes of society

the friend as well as the physician. He was also repeatedly employed in medico-legal inquiries, and had a considerable amount of consulting practice. In short, there were few men better known, or more favourably known, in the northern division of Ayrshire than the late Dr. Robertson. He died on the 16th January, 1897, at the age of 65, after a long and distressing illness, extending over nearly three years. Probably commencing in a sudden blindness in one eye, from obliteration of the central artery of the retina, this illness took on the form of a cerebral affection associated with a slight, but pretty constant, aphasia amounting to forgetfulness of particular and often very familiar words. There never was anything approaching to complete aphasia or agraphia, and there was no paralysis at any time; but although his mind remained intact, and his interest in his work continued, he became gradually convinced that it was necessary first to circumscribe, and afterwards to discontinue, his professional services to the public. Some time ago he formally withdrew from practice altogether, and since then has been in a large measure confined to the house, and often to his bed, suffering greatly from pains in the head, and from occasional sudden seizures of unconsciousness, which never altogether reached. but latterly approximated to, the epileptiform type. death was rather sudden and unexpected; for it is reported that, dying on Saturday morning, "he received visitors on Friday afternoon, and conversed with them with not a little of his old animation, and in his usual calm, clear, collected manner recalled the past, and sent messages to friends he had not seen for a time." Dr. Robertson was a most abstemious eater and drinker, but had probably inherited gout in a chronic form with some deformities of the articulations, and also probably some arterial degeneration, of which the cerebral symptoms may have been the expression. The precise nature of the lesion, however, remains obscure.

Dr. Robertson was a native of Aberdeen, where he was born in 1832, but was brought up mainly in Dundee, where his father and mother resided, and was educated at the grammar school there. He was of a good North-country stock, but lost his father at nine years of age, and owed to his mother, to whom he was devotedly attached, a large amount of his best education. She was a gentle, refined, and charming woman, and a teacher in the best sense of the word. From the grammar school he passed to the University of Aberdeen, where he passed through a very complete Arts course with distinction, and had many kindly memories of his old professors

there. His knowledge of classics, as well as of French and Italian, was much above the average, especially as he had not cultivated the modern tongues by any opportunities of travel on the Continent. From Aberdeen he went to Edinburgh to study medicine, earning the high approval and friendship of most of his professors there, and afterwards taking the Diploma of the Royal College of Surgeons in 1859, followed by the Fellowship of the College in 1862. Very early in his career, he saw a great deal of country practice as assistant to the late Dr. Alexander, of Wooler, in Northumberland, one of the most active medical practitioners of his day, and a man of fine literary instincts and culture. But on the death of the late Dr. Houston, of Ardrossan, young Robertson was induced to settle there as his successor, and very soon took the place which he held to the last, till illness obliged him to retire. He married, in 1874, the youngest daughter of the late James Boyd, of Orchard, West Kilbride, who, with two sons, survives him.

#### THE LATE PROFESSOR EMIL DU BOIS REYMOND.

WITH the death of the old year occurred that of one of the greatest of the German physiologists, for on 26th December, 1896, there passed away in Berlin, his native city, Emil du Bois Reymond. Born in November, 1818, of French-Swiss parents, Emil had been intended for the Church, but having in 1838 begun to study geology in the University of Bonn, he soon turned his attention to biology, and studied anatomy and physiology under the great Johannes Müller in Berlin.

Carlyle once said, "Voltaire is the eighteenth century;" we may similarly say, "Du Bois Reymond is physiology." In 1841 he began his studies in animal electricity, embodying as his thesis for the degree of Doctor his results in a department which he may be said to have created. His thesis was entitled "Quæ apud veteres de piscibus electricis extant argumenta," and was but the forerunner of his great "Researches on Animal Electricity." This subject, when he approached it, was a tissue of empiricism and quackery; he raised it to the dignity of an integral part of physiology—an entire department—electro-physiology.

Outside this section of the science his influence was not so widely felt as, perhaps, that of Helmholtz or Ludwig; but in his own sphere he was supreme. Each difficulty as it arose was met with a new device, conquered by a new instrument,

until the now luminous way into the dark territory of animal magnetism and electricity was strewn with monuments of inventive genius—Du Bois' keys, Du Bois' coils, Du Bois' rheocords, rheonomes, compensators, non-polarisable electrodes, and myographs—until at any rate the student is thankful that he did create only one department.

Du Bois Reymond's discoveries were, of course, subjected to the most severe scrutiny; and though Hermann and others have found it necessary to express somewhat differently certain of his results, and even to deny altogether certain of his conclusions, the vast majority of the facts concerning the physiology of nerve and muscle which he brought to light are accepted to-day precisely as he stated them, and are the recognised foundation of the modern "exact" science of experimental electrical physiology as we now know it; in a word—they are classical. His name has become a part, at any rate, of German physiological nomenclature in the

Appointed Professor in the University of Berlin in 1855, he had to follow a mighty one in physiology—Johannes Müller—and had a great reputation to uphold. In Paris in 1850, and in London in 1852, 1855, and 1856 he demonstrated the new facts to his sceptical brother scientists; his lectures at the Royal Institution on these occasions being models of the art of demonstrating phenomena which, a few years previously, it would not have been thought possible to show to more than half a dozen persons at once.

adjective "Du Bois'sche," which is applied in speaking of his

As the Professor in Berlin he became, partly from his influential official position, and no less from the charm of his genial personality, the source of inspiration to a host of

successful workers and pupils.

instruments.

His laboratories in the Physiologisches Institut in Dorotheen Strasse were the model of the fully-equipped home of research, where, unencumbered as they are in Germany by the teaching of histology, and relegating physiological chemistry to an almost distinct department, experimental physiology received the undivided attention of a band of experts and students attracted from Europe, Asia, and America. The Patriarch of Physiology was no ordinary man to pass unnoticed in the crowd. When the writer had the honour of meeting the great master, his intellectual vigour was as fresh as it had been fifty years before, his interest in all work going on, however humble, as keen as ever, and the hearty, kind way in which he showed his instruments, class-room, and, above

all, his iron fireproof diagram-safe, cannot easily be forgotten. The old man was then suffering from rheumatism, and so leaned heavily upon a stick; and one wondered if he were cogitating upon the pathology of his ailment as he had done previously with his hemicrania, when he noticed that the side affected was at a higher temperature than the other! Professor du Bois Reymond was an excellent linguist, and spoke English with a distinctness of articulation and an absence of foreign accentuation quite astonishing. He was very un-German-like in personal appearance, which, from his florid complexion and large features (for he had large ears and nose), more resembled that of the bluff countryman than the erudite city professor. He had a noble bearing, which at once commanded respect, was deliberate in his speech, not a man of many words, and he looked you straight in the face with his large brilliant eyes. His kindliness of manner was tempered with a grave courtesy; you felt you were dealing with a man whose life was so occupied with weighty affairs that trifles could find no place in it—not that he despised them, but they were for others—a man to whom time was most precious, who would hear you out if you had anything to say worth hearing, but a man who would not hesitate to bid you "good morning" with a distinct air of finality if you had nothing more important than the weather to discuss with him.

The great physiologist, like so many men of very active intellect, was, in controversy, a keen fighter. In his early days, in association with Helmholtz and Mayer, he had fought with zest against the "vitalists," showing that the laws of life were no other than those of physics and of chemistry. That this defence of materialism and of "the unity of nature" was carried too far, few thoughtful biologists now deny; processes in living things not being wholly capable of explanation by the purely physical laws of matter that has never lived; and even Du Bois, in later life, veered to a philosophical position which was actually antagonistic to the Jena school of evolutionists as represented by Hæckel. In "Die sieben Welträthsel" and "Die Grenzen der Naturerkentniss" he is neither wholly a materialist nor wholly an agnostic, while in "Ignoravimus" he dogmatises, where he believes that he is certain, with a fulness of conviction very far removed from, at any rate, the attitude of uncertainty of the latter school. Profound expert as he was, Professor du Bois Reymond did not refuse to deliver what are called "popular lectures," being one of those who conceive that the duty of the savant, laity-wards, should be that of the high priest of science, bringing forth of the treasures of the sanctuary, and not merely that of the porter whose whole duty is to lock the door. Like Helmholtz in his own country and like Huxley in this, Du Bois brought down the fascinating treasures of the sanctuary of science to the comprehension of the lay public, and did so with a vigour and a freshness which showed him no mere specialist, but a born expounder as well.

The name of Emil du Bois Reymond shall cease to be part of the very web and woof of physiology when that science

shall cease to exist.

D. F. H.

#### CURRENT TOPICS.

GLASGOW AND WEST OF SCOTLAND MEDICAL ASSOCIATION ("GLASGOW MEDICAL JOURNAL").-The annual meeting of the Association was held on the 22nd of January last in the Faculty Hall, Dr. J. Crawford Renton, President, in the chair. The Treasurer's report showed a satisfactory balance to the credit of the Association, and Dr. Monro was also able to announce an encouraging increase in the membership. This was regarded by the members as very satisfactory in view of the competition which the Associaton has this year had to meet in the establishment of a second medical journal in Edinburgh. The Association was approached by the promoters in Edinburgh of the Scottish Medical and Surgical Journal, with a view to copartnery in the undertaking, but after a full and anxious consideration, it was decided that it could not see its way to discontinue the publication of the Glasgow Medical Journal, and thereby sink the individuality of the Glasgow Medical School so far as medical journalism was concerned. The members were the more confirmed in this policy by the consideration of the circumstance that the old Edinburgh Medical Journal was to exist as before. The hope was expressed that members of the Glasgow School would do their best to still further increase the membership of the Association, by means of which Glasgow, from the presence of its Journal in many Continental and American libraries, maintained its individuality as a great medical centre. The Editors' report was unanimously adopted, and the following office-bearers for 1897 elected :—

President,					Dr. ALEX. MILLER, Crosshill.
Vice-Presidents,		•			Dr. George Marshall. Dr. W. J. Fleming.
Editors, .		•	•		Prof. Joseph Coats. Dr. John Lindsay Steven.
Treasurer, .				•	Dr. T. K. Monro, 10 Clairmont Gardens.
Secretary,	•	•	•	•	DR. JOHN LINDSAY STEVEN, 34 Berkeley Terrace.

#### General Business Committee.

Dr. R. M. Buchanan.	Dr. Barclay Ness.
Dr. M'Lachlan (Dumbarton).	Dr. Kennedy (Bearsden).
Dr. John Glaister.	Mr. H. E. Clark.
Dr. C. O. Hawthorne.	Dr. W. K. Hunter.

At a meeting of the Harben Nomination Committee held last month in connection with the British Institute of Public Health, Professor Max von Pettenkofer, Scientific Director of Liebig's Extract of Meat Company, was nominated Harben Gold Medallist for 1897. The medal was founded in 1895 by Henry Harben, Esq., J.P., for the recognition of eminent service to the public health, and one presentation is made every year.

THE APOLLINARIS COMPANY, LIMITED.—"In our issue of 30th October," writes the Financial News, "there appeared, under 'Voice of the Public,' a letter signed 'Expert,' in which it was alleged: (a) That the Apollinaris Water sold by the Apollinaris Company, Limited, is not a genuine natural mineral water; (b) that the Government of the United States had treated it as an artificial or manufactured water; and (c) that in an action commenced by that Government the proprietors of Apollinaris Water were condemned to pay a fine of many millions. This letter was inserted inadvertently, during the temporary absence of the editor, and we desire to express our regret for its publication. We are satisfied that the Apollinaris Water sold by the Apollinaris Company is the natural product of the Apollinaris Spring in Germany, and that the allegations of our correspondent are absolutely false and without foundation. In the United States, where there was a heavy and almost prohibitive Custom duty on artificial mineral water, while natural mineral waters were admitted free of duty, the United States Government was induced by trade rivals of the Apollinaris Company to investigate whether Apollinaris Water should be classified

in the former category. After full and independent investigation, during which the Government sent its own experts to the Apollinaris Spring in Germany to examine and report upon the spring and the process of bottling Apollinaris Water, the Secretary of the Treasury published a decision which declared Apollinaris Water to be a natural mineral water, and, as such, entitled to entry free of duty into the United States. This decision has since been repeatedly confirmed. Under these circumstances we unreservedly withdraw our correspondent's statements, and regret having published them."—Financial News, 8th January, 1897.

#### MEETINGS OF SOCIETIES.

## GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING IV.—27TH NOVEMBER, 1896.

The President, Dr. W. L. Reid, in the Chair.

## I.—SPECIMENS FROM A CASE OF RUPTURED ABDOMINAL ANEURYSM.

By Dr. MIDDLETON.

Dr. Middleton showed as a fresh specimen a ruptured aneurysm of the descending aorta occurring in a man, 29 years of age. The aneurysm rose from the posterior wall of the aorta just above the level of the pillars of the diaphragm, eroded several of the vertebræ, grew down into the abdomen, and burst below the diaphragm, ultimately with extensive hæmorrhage. Pain was the first and the leading symptom, and the diagnosis was obscure until shortly before death.

#### II.-CASE OF ACROMEGALY.

By Dr. MIDDLETON.

John M'K., æt. 29, iron turner, consulted Dr. Muir, of Monteith Row, about the middle of May, 1896, for headache and giddiness. Struck with the man's appearance, Dr. Muir

sent him to me to determine whether it was a case of acromegaly. I have no hesitation in saying that it is, and the grounds on which that diagnosis is based are as follows:—

The face is long and oval; the forehead slopes backwards; the supra-orbital ridges are prominent; the nose is large; the lips are thick, but the lower lip is not everted; the chin is large, but does not protrude in front of the upper jaw. The tongue is not unduly large. The palate is highly arched. The teeth are bad.

The hands are of enormous size, and present the characters typical of acromegaly. They are enlarged in breadth more than in length. The nails present no striation; there are no nodosities on the phalanges; the palmar aspect of the fingers has a very "cushiony" feeling. The feet present similar characters.

Skiagrams of the hand and foot, taken by Dr. Faulds, show marked enlargement of the metacarpal, metatarsal, and phalangeal bones, especially, however, of the phalangeal. This enlargement is general, but affects the breadth of the bones more than their length. In some of the fingers the interphalangeal joints have become obscured, apparently from the ossification of their cartilages. There are no stalactitic nodosities about the joints, no hour-glass appearance of the middle phalanges, and no evidence of central absorption in these bones, conditions which have been described and illustrated by MM. Gaston and Brouardel in a paper on acromegaly (with a skiagram) in La Presse Médicale, 29th July, 1896.

The thorax also is characteristic; there is rounding of the shoulders, with protrusion and enlargement of the sternum and lower ribs in front. There is also marked lordosis. In the lower dorsal region is an angular curvature, affecting two

or three of the vertebræ.

In several of the finger-joints there is slight crepitation on movement. There is slight atrophy of the interossei in the hands. The knee-jerks are normal. The voice cannot be said to be affected. The cardiac dulness is normal. There is neither thirst nor polyuria, and the only specimen of urine examined was free from albumen, sugar, and peptones. There are no fibrous tumours in the skin. He makes no complaint of his vision, but he says his eyes tire after reading for half an hour. Roughly tested, there is no limitation of the field of vision, and certainly no hemianopsia.

His only complaint is of headache and giddiness. The headache is flitting, sometimes vertical, sometimes occipital.

These symptoms, however, have never kept him from work, and he has no feeling of any impairment of strength.

He cannot remember the time when his hands and feet were not big, as compared with those of other boys, and especially as compared with those of the other members of the family—viz., six sisters, who are all of ordinary size. resembles his mother more than his father, she being of large build which his father is not. Photographs taken at the ages of 17 and 21 years show the enlargement of the hands and face very evidently. As acromegaly is not a congenital affection, but one that comes on generally at the period of adolescence or later, the date at which the enlargement of the limbs was first observed can almost always be determined. In this case that cannot be done, and yet I have no doubt of the diagnosis. It is quite probable that an increase in the size of the hands and feet, &c., taking place early in life and very gradually would escape notice; when first commented on it would probably be said that the boy had big bones, and the further increase in size would be regarded as the natural growth with increasing years.

# III.—PATIENT WITH UNUSUALLY LARGE HANDS. By Dr. C. O. Hawthorne.

This man was shown on account of the unusual size of his hands and feet. The hands were large both in length and breadth, but did not display any of the features of acromegaly or hypertrophic pulmonary osteo-arthropathy. The patient, who was 50 years of age, believed that his hands and feet had always been large, and there was other evidence to support this statement. Skiagrams taken by Dr. D. J. Mackintosh confirmed the view that, whilst the bones were large, there was neither disproportion nor distortion. Dr. Hawthorne submitted the case mainly as a contrast to those shown by Dr. Middleton and Dr. Edgar.

# IV.—CASE OF HYPERTROPHIC PULMONARY OSTEO-ARTHROPATHY. By Dr. Edgar.

This is published as an original article at p. 81.

Dr. Middleton had seen Dr. Edgar's case, and had no doubt that the diagnosis was correct. The number of cases of the disease at present described was so few that individual features could not arbitrarily be insisted upon as essential to the diagnosis. Hence, whilst in some respects the present case departed from

previous records—e.g., the enlargement of the carpo-metacarpal region, and the presence of pigmentation of the skin—the main features of the condition were quite sufficient to establish the diagnosis. A tendency to narrow the range of a newly noted diseased condition always existed until a more extended experience showed the possible modifications. Thus, at first it was insisted upon that in acromegaly the joints were never affected, but he himself had shown a case of undoubted acromegaly with conspicuous joint affections.

## V.—CASES OF CHOREA IN YOUNG WOMEN.

By Dr. A. Napier.

CASE 1. J. M., æt. 17, factory hand, was admitted to the Victoria Infirmary on 29th May, 1896 (dismissed well on 2nd July), suffering from unsteadiness of limbs and partial loss of power in right arm and leg. Has always been "nervous" and easily excited. Hands began to twitch six weeks ago, and things carried in them were often dropped; this was accompanied by swelling and pain in joints of right arm, to such a degree as to limit movement and deprive patient of power to feed herself. There was then, also, loss of power, but it is not clear whether this was due to pain or to an actual paresis, but it is noteworthy that shortly afterwards the right leg became similarly affected, and was shuffled along the floor in walking. On admission choreic movements are marked in all four limbs and in head. Menstruation regular. Walking is unsteady, and right leg is distinctly dragged. There is pain on pressure over right shoulder-joint in front; right arm can be raised to a right angle with body; higher movement causes pain. Right biceps enfeebled; grasp with right hand very feeble.

Heart.—The sounds seemed unduly loud at apex; V.S. aortic

murmur.

Put on a mixture of pot. brom., pot. bicarb., and sod. salicylat., with liq. arsenicalis added in increasing doses.

Patient improved rapidly, progress towards recovery being interrupted only by an attack of tonsillitis, probably rheumatic.

CASE 2. M. D., et. 17, weaver, was admitted to the Victoria Infirmary on 9th June, 1896 (dismissed on 17th July, well).

This case was very similar to the last, but not so severe. Choreic movements began about two months before admission, and have become steadily worse. They involve right side as well as left, but are markedly worse on latter side; they can, to a certain extent, be controlled by an effort of the will.

Three weeks before admission there was a slight attack of rheumatism affecting chiefly left arm and leg. There is a V.S. murmur at apex. Treatment same as in last case. Progress interrupted by a subacute rheumatic attack lasting five days.

The next two cases to be reported were both of extremely

severe type, and both patients died.

CASE 3. M. D., a young woman of 21, was admitted to the Victoria Infirmary on 6th June, 1894, and died on 14th July; as the movements had begun only four days before admission, the total duration of the illness was exactly six weeks. Two years previously patient had suffered from rheumatic pains in her joints, and six months before the choreic seizure she was in hospital with scarlet fever. The various members of the family to which she belonged were markedly rheumatic. Present illness seems to have begun suddenly, after a violent quarrel with her mother, though, as bearing on possible causation to some extent by imitation, it has to be mentioned that the daughter of her landlady, aged 19 years, took chorea while patient was in hospital.

On admission it was seen that the movements were incessant. violent, and universal, even the eyes being at times jerked upwards and to the right. The muscles of articulation were so affected that patient could not speak or give any account of her ailment; she was intelligent, however. On being asked if she had ever suffered similarly before, she shook her head; and whether she had ever had rheumatism, she nodded and held up two fingers, referring probably to her attack two years before. The left limbs were more violently convulsed than the right. The hands were constantly being put up to the muscles of the throat, and on being asked if she had pain there, she nodded. There was much difficulty in swallowing, and the jaws frequently closed spasmodically on the nozzle of the drinking-cup. Patient could not protrude the tongue, which was evidently swollen. Pain was complained of in left shoulder. Besides turning and twisting and throwing herself about in bed, patient frequently shouted aloud in an incoherent and inarticulate manner, and was altogether so noisy and violent that she was put in an isolation room, and moderate restraint had to be employed by means of the bed-sheet. At this time patient had no delusions, and was not maniacal or otherwise apparently mentally deranged, the shouting and noise being obviously as little under her control as the movements were. Temperature for first ten days was normal.

An attempt was made at first to overcome the disease by

giving largish doses of antipyrin, but this drug failed us, its only effect being to bring out a copious red measly rash. Then chloral and bromide of potassium were given, and sometimes the bromide alone; while on a good many occasions chloroform had to be administered to control the noise and the muscular spasms. These sedative drugs invariably had a good effect for a time, giving rest and sleep, but on intermitting them the symptoms returned with renewed violence. The heart, examined when patient was thus asleep, was found to be in all respects normal. Feeding was a matter of some difficulty, except after a dose of chloral or bromide, when fluids and semi-solids were swallowed with comparative ease.

On 15th June, nine days after admission, patient had an ordinary dose of castor oil, which she vomited, and then passed

motions and urine in bed.

During the next three days the spasms and shouting increased in violence, temperature rose to 104° F., and patient became distinctly delirious and had delusions. The head was now shaved (under chloroform) and ice applied. Two days

later the temperature was subnormal.

On 20th June the following note was made:—"Muttering delirium, though patient is quieter; there is a pinched look in the face; abdominal wall retracted; no paralysis; swallowing easy; pupils dilated, left more than right, alternately contracting and expanding when exposed to light; no squint; no paralysis; tuche cérébrale well marked; patient much quieter, makes no sound and does not speak unless irritated. At midnight pupils were found to be normal, being equal and responding to light."

21st June.—"Patient more restless again, but still slightly intelligent, saying 'yes,' 'no,' and 'thank you,' though only after prolonged and very obvious effort. Motions passed in

bed."

22nd June.—"Slight paresis of right side of face; patient only semi-conscious, shouting when disturbed, but making no articulate complaints; erythematous flush on arms."

23rd June.—"Patient more noisy, but slightly intelligent; pupils, when eye is exposed, alternately dilate and contract,

but are not sensitive to light."

25th June.—"Patient better; talks more sensibly; passes motions in bed; is inclined to sob after being questioned for some time."

26th June.—" Patient talks fairly coherently when roused, but soon lapses into incoherent rambling."

29th June.—"Since last note patient has been more noisy

and restless; speech quite inarticulate; pupils again equal,

and react to light; temperature rising."

1st July.—"Patient rather quieter; moves head in an irritable way when eye is examined, and grinds her teeth. This grinding of the teeth has been a feature of the case from the first. Pupils dilated and quite insensitive to light."

2nd July.—"Temperature 105.6° this morning; pulse 156, and very feeble; slight cyanosis; pupils dilated and immobile."

3rd July.—"Patient still restless and throwing herself about in a feeble way; she is slightly conscious, and tries to say 'Maggie' when asked her name; pupils dilated; head turned to left, and very markedly arched backward."

5th July.—"Temperature fell this morning to 96.4° F., and

pulse became almost imperceptible."

6th July.—"Patient rather less noisy; took a flower in her hand from nurse and smelt it; cannot speak articulately, but tries to tell her name when asked; still shows choreic movement."

8th July.—"No arching backward of head while asleep; pupils, when first looked at, markedly contracted and equal; then, when eyelids were held open and electric lamp brought near to the eyes, there was at first no response, then pupils slowly dilated, and remained so for some seconds, afterwards contracting in stages; later the pupils were widely dilated, and did not contract under light."

11th July.—"Patient still subject to violent choreic movements, and very noisy; slightly intelligent; night nurse states that on being asked if she understood what was said to her,

patient replied in an irritable way, 'I ken fine.'"

12th July.—"Temperature rising again—103.4° F. at 4 P.M.; respirations irregular and slow, about nine full breaths per minute; at 8 P.M. pulse irregular and rapid; respirations 40 per minute, shallow, with an occasional deep inspiration between."

13th July.—"Temperature has suddenly risen to 107° F.; pulse, 188; respiration, 60; cold sponging, &c., brought temperature down to 104.8° F. Patient died at noon, temperature rising to 108.2° F. before death, and to 108.8° F. shortly after death."

shortly after death."

At the post-mortem examination absolutely no abnormality was found in any part of brain or spinal cord or in their membranes. Thoracic and abdominal organs normal, except for a few caseous glands at root of right lung. Uterus small, measuring 2 inches from external os to fundus, but otherwise normal.

CASE 4. H. S., aged 18½, biscuit packer, admitted to the Victoria Infirmary on 6th July; died, 5th August, 1896; duration of illness, seven and a half weeks.

Patient is said to have been always excitable. Four years ago she was struck on the head by a hoist, and at that time had slight twitchings for a few days. Since then she has frequently complained of frontal headache. Menstruation regular.

For past two months she has suffered from rheumatic pains

in arms, legs, and feet.

Twitchings began three weeks ago; her work consisted in carrying trays of biscuits from one department to another, and she found that her arms trembled so much that she dropped her tray. This continued till three days before her admission, when the movements became worse and more wide-spread. All the limbs were violently affected, also the facial muscles and the muscles of articulation.

Sedatives were given (bromide of potassium, and the same with chloral) with the effect of producing a little sleep, but on

awaking the movements were as bad as ever.

On third day after admission patient became much worse, and also quite maniacal, so that the restraining sheet had to be used. Hyoscine, injected subcutaneously, gave some relief and sleep, but had no durable influence on the condition. Feeding became difficult, and nutrient enemata had to be given.

The subsequent course of this case was much like that just described. Under the influence of various sedatives, chiefly bromide of potassium and chloral, some diminution of the movements was obtained, often lasting for a few days at a time, when swallowing became easier, and patient was fairly intelligent, though any attempt to perform any purposive movement resulted always in a series of irregular spasms; attempts even to reply to questions led only to a few jerky grimaces and occasionally to an inarticulate shout. As the patient became gradually weaker, the movements naturally became less violent, but they continued almost as frequent as ever.

During the last fortnight of her life patient became extremely exhausted; bedsores appeared on back and on arms; breathing became very rapid, and pulse varied from 120 to 140. Temperature throughout was subnormal till five days before death, when it rose to 102° F., falling to normal on day of death. For about ten days patient was almost unconscious, but a loud question roused her a little, and gave rise to a few faint but still irregular and uncontrolled movements. Patient died

No post-mortem was allowed.

from exhaustion.

About the same time I had under my care in private a

similar case which happily had a better ending.

CASE 5. Miss C., aged 21, was sent home from an English school, where she was qualifying to become a teacher, suffering from chorea of a fortnight's duration. Immediately on reaching home the chorea became so violent that the services of two nurses had to be secured to help the friends to keep the patient from doing herself an injury. The movements at this time were of a very extraordinary kind; from the recumbent position, the patient threw herself, apparently without effort, across the foot of her bed with the face downwards; on another occasion, and with apparently no effort, she threw herself entirely out of bed to the floor. This was accompanied by loud maniacal shouting, by illusions, and by delusions (the supposed presence of absent and of dead friends); she also failed to recognise her nearest relations and friends.

The illness lasted about ten weeks, and ended in complete recovery. As regards medicines, most benefit seemed to result from the administration of chloral hydrate with infusion of digitalis.

CASE 6. A. W., aged 19, domestic servant, was admitted to the Victoria Infirmary, on 5th December, 1894, and dismissed on 22nd of same month. She suffered then from subacute rheumatism of a week's duration, involving hands, wrists, elbows, and knees. Temperature never rose above 102.5° F., and patient was practically well in a week after admission. There was one slight relapse. There was a short V.S. murmur, heard best in pulmonic area; and here, also, the second sound was reduplicated; persistent pain was also complained of over the præcordium.

Patient was readmitted on 30th January, 1895, suffering from slight return of pain in hands and knees. Temperature at this time, and for some days after, was normal. Choreic movements were distinctly present, but not, so far, very violent. Lungs normal. Cardiac percussion area not obviously increased; impulse wide-spread and unduly forcible; marked pulsation in epigastrium and episternal notch; carotid impulse visible. Blowing V.S. murmur heard over whole præcordium; rough A.S. murmur at apex and to inside of same. Urine non-albuminous.

About 14th January temperature began to rise, and heart's action became irregular, the beats tending to run in pairs. It is further noted that since admission patient's mental condition

has been peculiar; she sometimes talks incoherently, and has distinct delusions. Choreic movements continue.

17th January.—Sharp stabbing pain complained of in præcordium and left side. No pleuritic friction, but pericardial friction audible at left margin of sternum in second and fourth

intercostal spaces.

Fever then became more marked, temperature rose to about 103° F., and patient was actively delirious for some days, the choreic movements still going on, though not violently. Pericardial friction sounds became day by day louder and rougher, then became steadily feebler, till at end of January physical signs of pericardial effusion were noted. Pulse became very rapid and irregular (120 to 140), and patient was becoming exhausted.

On 4th February the pericardium was tapped, and 5 oz. of fluid removed. This was followed by considerable improvement as regards circulation, pulse falling to 116, and patient being obviously much easier. Still the chorea was unabated, becoming rather more violent, and the loud outery almost incessant. Patient became steadily weaker, less intelligent, and disposed to lie in one position, with the legs drawn up as in cases of spastic paralysis. She became much emaciated, and bedsores appeared at various points. Then, apparently as the result of the administration of chloral and digitalis, an improvement set in; choreic movements became less marked and finally ceased, while the mental condition cleared. Patient put on flesh, and ultimately made a complete recovery; she was dismissed on 2nd April, after a period of residence extending over three months.

Remarks.—The points to which attention may be directed in these histories are—

1. The gravity of the disease in its severer forms, two cases out of six having proved fatal.

2. Sex, all the patients having been women.

3. The association of rheumatic phenomena (articular, endocardial, and pericardial) or scarlet fever with this disorder.

4. The occurrence of the chorea on the same side as the preceding rheumatic affection in cases in which both ailments were slight.

5. The presence of actual mania, which in its acuteness seemed proportionate to the violence of the muscular movements.

Dr. Wallace Anderson thought it was somewhat misleading

to describe these cases as adult chorea, as the patients had scarcely passed the period of adolescence. Chorea after the age of 24 or so was very uncommon, and he had only met with a single case. The *post-mortem* examination in Dr. Napier's case confirmed the statement that chorea is a functional disease. He was accustomed to teach that it depended on the instability of the nervous system in youth, as paralysis agitans resulted from the instability of old age.

Dr. Jones had seen a case very similar to the severe cases narrated by Dr. Napier. The patient was a lad, æt. 18 years, and the violent nature of the movements and the maniacal excitement produced exhaustion and death in the course of a

few days.

Dr. Middleton thought the case quoted by Dr. Wallace Anderson was an example of chronic chorea, which, once established, is likely to persist. It may be seen in hemiplegic limbs, but sometimes occurs quite apart from paralysis. As a rule, there is no history of the existence of the disease in early life. All post-mortem examinations hitherto reported agreed with the negative results noted in Dr. Napier's case.

## MEETING V.—11TH DECEMBER, 1896.

The President, Dr. W. L. Reid, in the Chair.

ADDRESS ON SOME POINTS CONNECTED WITH THE PATHOLOGY AND TREATMENT OF DIABETES MELLITUS.

BY DR. F. W. PAVY.

Dr. Pavy, in the first part of his address, contrasted the condition of the healthy man with that of the diabetic in respect to the relationship of each to the carbohydrate elements of the diet. In the first, these elements were recognised as forming an important contribution to nutrition and vigour, whilst to the diabetic the carbohydrates brought general enfeeblement, mental debility, and the risk of certain definite and recognised dangers. Proceeding to consider the reason for this difference, Dr. Pavy remarked, that the essential point of contrast was offered by the presence of sugar in the blood of the diabetic. As long as this state exists, there are more or less marked evidences of ill health and possibilities of disaster, which

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altogether disappear when the condition of glycohæmia is removed. Dr. Pavy denied that grape sugar is a normal constituent of the blood, except in the extremely minute amount in which it is to be found in the tissues and fluids of the body generally, and further, insisted that this amount is in health constant and equally present in all parts of the circulation. From these considerations he argued that the carbohydrates taken as food must in the condition of health be prevented from entering the blood as carbohydrates, and this he maintained is effected by their conversion, prior to their admission to the general circulation, partly into fat, and partly into proteid having the chemical constitution of a glucoside. This transformation of the grape sugar of the alimentary canal Dr. Pavy contended is brought about first in the intestinal villi and subsequently in the liver. When the arrangements for securing this transformation are interfered with in any way, grape sugar in its unaltered form passes into the blood-stream. and the condition of glycohæmia expresses itself in the form of glycosuria. Thus, the non-occurrence of glycosuria in health, according to Dr. Pavy, depends upon the successful working of a physiological mechanism by which the conversion of grape sugar into fat and proteid is effected. In temporary glycosuria, following the ingestion of large quantities of carbohydrates, more carbohydrate is administered than this mechanism can undertake; in the glycosuria of old age, the capacity for conversion has declined; whilst in ordinary cases of diabetes, some more distinct pathological depreciation of the sugartransforming arrangements has occurred. The treatment of cases of diabetes, therefore, necessarily involves the removal of carbohydrates from the diet, until the natural function by which they are converted into fat and proteid is restored to its normal vigour. Abstinence from carbohydrates, leading to the disappearance of the glycosuria, is rapidly followed by improvement in the patient's nutrition, and all risk of diabetic coma and other complications ceases. Opium has some power of restoring the normal power of sugar transformation, and its alkaloid codeine has less attendant disadvantages than either morphine or opium itself. Under this dietetic and medicinal treatment an ordinary diabetic patient gains flesh in spite of the restricted diet; and sugar disappears from the urine. Pavy insisted upon the fact that many diabetic "breads" are quite unreliable, as they contain large quantities of starch, and pointed out that by toasting bread the less soluble starch is changed to the more soluble dextrine—a change which facilitates absorption of carbohydrate material from the alimentary

canal—and is therefore opposed to the welfare of the diabetic. The reintroduction of carbohydrates into the diet when the patient has ceased to have sugar in his urine has to be undertaken very gradually, and is in every case somewhat of an experiment; it is called for when the patient, having improved in weight for some time, again begins to lose flesh, but without return of the glycosuria. In conclusion, Dr. Pavy referred to the acute form of diabetes met with in young adults, and expressed his suspicion, that in these cases there is not merely glycohæmia due to the breakdown of the sugartransforming apparatus of the alimentary canal, but that in addition the proteid of the tissues is split up, probably by the action of a ferment in the blood, and that one of the products of this chemical change is grape sugar, the proteid matter being essentially a glucoside, and thus yielding glucose as one of the products of its decomposition.

The address was delivered in the Hall of the Philosophical Society, and was listened to with great interest by a large

audience of practitioners and students.

On the motion of the President, seconded by Dr. Middleton, a cordial vote of thanks to Dr. Pavy was passed with acclamation.

## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1896-97.

MEETING II.—9TH NOVEMBER, 1896.

DR. W. J. FLEMING in the Chair.

I.—INTERNAL SQUINT, THE RESULT OF FRACTURE OF THE BASE OF THE SKULL.

By Dr. J. KERR LOVE.

Annie A., æt. 7, fell over a stair on 4th September, 1896, a height of 16 to 20 feet. I saw her shortly: she was comatose, with blood flowing copiously from the meatus of the right ear and from the nose. She continued comatose during the night of the 4th, but on the morning of the 5th was partially conscious. Some vomiting also had taken place, and there was blood in the vomit. A large fluctuant swelling was discovered behind the right mastoid, but there was no corresponding

scalp wound. The girl lay curled up in bed with her back to the light, her knees drawn up, and although she could be roused it was only to give an excited turn in bed and resume her posture. I was away a good deal on holiday during the rest of September, but the following facts were clearly ascertained. The bleeding from the nose lasted two or three days; that from the ear five days, in spite of careful cleansing, drying, and powdering of the external auditory canal. During the fourth and fifth days the patient had a partial but quite distinct right facial paralysis. She never passed her urine or fæces in bed. From the 10th to the 15th September I did not see her, but by the latter date the facial palsy was gone, she sat up in bed and was quite intelligent, but she had a wellmarked right internal squint. Five weeks after the accident, that is, about the time of the last meeting of this Society, the paralysis of the external rectus was absolute, and I have been in daily dread that this, the only remaining sign of what I believe to have been a fracture of the base of the skull would disappear, and that I would have nothing to show, for the muscle is recovering power. Within the last week the pupil has begun to move outward beyond the middle line. Dr. Thos. Forrest examined the eyes for me and found 1 dioptre of hypermetropia, an amount quite insufficient to account for the squint. The hearing is perfect, and a month ago I could find no perforation or cicatrix of the tympanic membrane.

Although there was no escape of cerebro-spinal fluid, the amount of bleeding from the nose and ear, and the fluctuant swelling behind the mastoid, make fracture of the base the most probable cause of the symptoms. The paralysis of the facial and the sixth are most probably compression signs, and the returning function of the sixth gives promise that at an early date the last evidence of this very serious accident will

disappear.

Mr. H. E. Clark asked if double vision had been noticed at any time during the illness, and Dr. Love said he had not

specially examined for this.

Mr. Maylard asked if any record of similar cases existed, to which Dr. Love replied that in fractures of the base of the skull, the cranial nerve most commonly affected is the sixth, to which Mr. Maylard demurred, alleging that the seventh is the more commonly affected cranial nerve.

Dr. Rutherfurd asked if it was commonly the case that the involved nerves were symmetrically affected. In his opinion, after examining the patient, the internal squint was no more marked than it is in children affected with squint quite apart

from injury. If the injury enfeebled both sixth nerves he would also expect to find rather grave concomitant symptoms.

Dr. Love replied that hypermetropia was present up to 1 dioptre, the condition being insufficient to explain the squint. There was not at any time any paralysis of the left external rectus, the eyeball being freely movable in any direction; before the accident there was no history of squint. There was marked swelling over the mastoid; bleeding from the ear and nose, and, inferentially, bleeding into the brain, causing paralysis of the sixth, and there was a temporary paralysis of the facial nerve, which developed on the fourth day after the injury.

Dr. Fleming said the history of the case afforded a striking illustration of the better results now obtained in fractures of the base of the skull by rest and antiseptic treatment

throughout.

II.—EPITHELIOMA OF THE LEFT TONSIL REMOVED BY LATERAL PHARYNGOTOMY AND BY DIVISION OF THE JAW IN FRONT OF ITS ANGLE.

### By Dr. NEWMAN.

D. S., aged 54, was sent to the Royal Infirmary on the 20th April, 1896, by Dr. James Paton, of Greenock, who informed me that the patient was suffering from malignant disease of the tonsil. He always enjoyed good health until six weeks previous to admission, when he began to suffer from pain in the throat, which had steadily become worse. While resting the pain was not severe, but during deglutition it was sharp and lacerating. The dull constant pain was referred to the root of the tongue and the faucial region, while the more acute pain extended to the ear. There was some difficulty in swallowing, and considerable increase in the saliva, so that the secretion tended to collect, and when accumulated it flowed from the angles of the mouth.

The voice was very little altered, only so far as the sounds were impeded by the pain produced by movements of the

muscles of the mouth and pharynx.

Examination of the pharynx revealed a tumour the size of a pigeon's egg occupying the left tonsil. The surface was very irregular, ulcerated, moderately hard, and showed a few small bleeding points. The growth was almost limited to the tonsil, but on very careful examination it was found to involve the anterior part of the posterior pillar, and extended down to, but did not involve, the base of the tongue. The anterior pillar was free, and there was no enlargement of the

lymphatic glands. The larynx was normal. Thoracic and abdominal organs were normal.

30th April.—A small portion of the tumour was removed for microscopic inspection, and when, on immediate examination, it was found to be an epithelioma, the tumour was excised at once by performing lateral pharyngotomy, in which the lower jaw was divided at its angle on the left side. The patient made a good recovery and is now well (December).

[Details of the case and the method of operating will be found in the British Medical Journal, 2nd January, 1897, p. 4.]

Dr. Renton said this was an extremely interesting case, and recalled to his memory a somewhat similar case that occurred in the practice of the late Dr. Foulis some years ago. The operation was similar, and equally satisfactory results were obtained.

Mr. H. E. Clark said that his experience of the operation in two cases satisfied him that the method, as first suggested by Dr. Foulis, was a good one. The tonsil could be effectually cleaned out by stripping up the mucous membrane along with the tonsil without interfering with the palate or the pharynx. When the tonsil is removed for cancer, immunity from recurrence is much longer than in cancer of other regions, due probably to the fact that cancer of the tonsil is more localised on account of its greater isolation from surrounding structures.

Dr. Dalziel asked why Dr. Newman divided the jaw below the angle rather than in the middle line, more especially as by working from the front a better view can be obtained, and any interference with the important structures in the neck is avoided.

Dr. Newman said his only objection to the remarks made was with regard to Mr. Clark's statement as to the more prolonged immunity from recurrence in cancer of the tonsil. As compared with recurrence in cancer of other regions, the chances of recurrence are very great in operations on the tonsil for cancer. Watson Cheyne had collected the statistics of the results in operations for cancer of the tonsils, and had demonstrated that in the majority of these cases recurrence had taken place. He (Dr. Newman) had seen eighteen cases where the condition excluded operation, and he had also operated in a number of cases, and only two of the patients are now alive; but these two cases are important, as they are still alive and well six years after the operation. Only seven cases of cancer of the tonsil have been recorded in

which growths have been completely removed through the mouth without any external incision. Wolff, Körte, Macintyre, Cheyne, and Watson, have each recorded one case, and I have had these two cases in which a cure was effected.

Mr. H. E. Clark drew attention to the fact that Dr. Foulis divided the jaw above the angle, not below. He also attached great importance to not dividing the mucous membrane until it had been freely stripped up along with the tonsil, whereby less bleeding was encountered during the operation, and a clearer view of the parts was thereby obtained. As regards the median division of the jaw, it could not be recommended on account of shock, and for this reason the median division is discountenanced in excision of the tongue.

Dr. Newman said it was certainly important to leave the mucous membrane intact as long as possible, so as to prevent blood entering the pharynx and permit continuous anæsthesia. This was more easily carried out by the incision adopted than

it could be by the one proposed by Dr. Dalziel.

## III.—EXCISION OF THE CÆCUM, WITH SUCCESSFUL USE OF MURPHY'S BUTTON.

### By Dr. J. CRAWFORD RENTON.

Dr. J. Crawford Renton showed a patient, æt. 30, whose cæcum he had excised for persistent fistula, following abscess in that region. Having performed two operations for closure of the fistula without success, Dr. Renton removed the cæcum with an ulcerating appendix, and joined the ileum to the colon with a Murphy's button. The button was passed on the sixteenth day. He also showed his "clamp," devised to pre-

vent undue pressure on the bowel.

Mr. Maylard said there were many points of interest in this case, but of these he would only mention two—viz., the clamps used and the size of the Murphy's button adopted by Dr. Renton. He took exception to the clamps, as the blades being straight the tissues would be too highly compressed. To prevent too tight compression he used in his own practice an ordinary pair of forceps, with a piece of elastic tubing at each end. This effectually clamps the bowel, and prevents excessive pressure. He thought the button used much too large to pass by the ileum, and he regards even the third size of button as dangerous.

Mr. H. E. Clark congratulated Dr. Renton on the success of his operation. He had used Murphy's button on four

occasions. In the first and the second operations ulceration occurred at the edges, and he lost the patients. In the other two, one for gangrene of the bowel and the other for stricture, the recovery was wonderful. When the anastomosis was completed gas was immediately passed, and fæces in two days, and the buttons were evacuated on the ninth and tenth days respectively. The result of the operation depends greatly on the way the mucous membrane is included in the grip of the button. The great charm of Murphy's button was its capability of rapid application, and the creation of a channel for the passage of gas and fæces. He was doubtful of clamps because of the inequality of their grip—the central part was less gripped than the ends, and injury to the tissue might follow; but he was pleased with Dr. Renton's clamps, and expressed a wish to use them in future operations.

Dr. Rutherfurd asked if the condition of the bowel was a tubercular one, and if the colon was entirely collapsed and thereby approximated in calibre to the small intestine. In operating on the colon or excum when the bowel is functionally active, there is a wide difference between the calibre of the large and the small intestines; when not functionally

active the difference is not so great.

Dr. Renton said Mr. Maylard's remarks about clamps occurred to his own mind, but he believed pressure was carefully graduated by his own clamps.

## IV.—RECURRENT SARCOMATOUS GROWTHS AFTER AMPUTATION OF THE SCAPULA.

BY MR. H. E. CLARK.

This paper was printed in full as an original article in our last issue.

MEETING III.—14TH DECEMBER, 1896.

PROFESSOR M'CALL ANDERSON in the Chair.

I.—EXCISION OF THE SCAPULA FOR SARCOMA.

By Dr. DALZIEL.

The patient, a male, aged 36, had his scapula excised ten months previously for sarcoma. Symptoms characterised by pains, swelling, and loss of power had existed for seven

months previously. It was supposed, and subsequently borne out by the examination of the specimen, that the tumour originated in the base of the spinous process, as the supraspinous, infra-spinous, and subscapular fossæ were each more or less filled with new growth, implication of the subscapular fossa being shown by the elevation of the scapula from the ribs. The entire bone was removed, and the muscles divided close to their humeral attachments owing to the infiltration of their substance by the sarcoma. Ligation of vessels prior to division rendered the operation comparatively bloodless. deltoid muscle (acromial attachment) was stitched to the back of the clavicle. The T-shaped wound healed by first intention, and the patient returned home at the end of three weeks. He had now perfect mobility at the shoulder, and was able to place his hand on the top of his head and at the lumbar vertebræ. He followed his occupation as butcher with comfort and freedom, finding difficulty only when he had to work above the level of his shoulder. So far there was no evidence of recurrence or affection of viscera, the patient having indeed gained weight since the operation.

The tumour microscopically proved to be a round and

spindle-cell sarcoma.

## II.—CONGENITAL ABSENCE OF RECTUM.

#### By Dr. DALZIEL.

The specimen shown represented the rectum as a thin but pervious duct communicating between the distended sigmoid flexure and the base of the bladder immediately behind the prostate. The infant was seen when three days old, in the Royal Hospital for Sick Children. There was no appearance of anus on the perineum, and though no impulse could be obtained an attempt was made to reach the bowel through the perineum. As this was found impossible, a colotomy was performed, and the bowel, stitched to the skin, was evacuated through a glass tube fixed in position by ligaturing the bowel around it. The extremity of the bowel was enormously distended, and the wall so thin as to render suturing difficult. Some meconium reached the peritoneum, but there was no peritonitis, and the colotomy proved perfectly satisfactory. At the end of a week the temperature commenced to rise, and the child died ten days later from cystitis and suppuration in both kidneys. It was evident that the bacillus coli communis, absent from the fœtal bowel, entered the bladder by the communicating canal and set up-

the fatal suppurative trouble soon after appearing in the intestine.

Dr. Dalziel remarked on the inocuous characters of meconium

at and for the first few days after birth.

Dr. Bryce said that the communication between bladder and rectum was very generally seen in cases of atresia ani. The developmental failure was one affecting the division of the cloaca interna into a dorsal tube or rectum and a ventral or uro-genital sinus. The septum which divides the cloaca has failed to complete the separation, and a communication is left, which is the remains of the early communication between the two. The question is, whether this communication is the persistent original allantoic diverticulum or a failure in the formation of the septum as suggested.

Dr. Renton said the case was most interesting clinically, and afforded some indication of the length of time the fæces could be passed through the bladder without setting up

trouble.

Mr. Maylard said that in similar cases he was accustomed to estimate the amount of imperfection or defect by the approximation of the tubera ischii. He said it was difficult to determine the time the meconium would keep aseptic as the children varied in the amount of vomiting that took place and in the kind of food they received. If able to take nourishment the meconium would speedily become septic, but if there was vomiting from the first and no nourishment taken, the meconium could not become contaminated.

# III.—CASE OF LUPUS OF NASO-PHARYNX IN A SYPHILITIC SUBJECT, TREATED MAINLY BY TUBERCULIN.

## By Dr. A. Napier.

D. W., aged 13½ years, was first seen by me about four years ago, suffering from a large patch of ulceration on right cheek and neck, obviously syphilitic, healing rapidly under iodoform and boric acid dressings, and potas. iodid. and syrup of iodide of iron internally. Patient was then lost sight of for about two years, the family having removed from the district. When next seen, in spring of 1895, disease of an ulcerative type had attacked the nose (internally and externally), palate (hard and soft), and throat; the nasal cartilages had disappeared and the soft parts up to the nasal bones, and so also had the cartilaginous portion of the septum. The uvula was gone, soft palate was divided by ulceration, and a large per-

foration existed in hard palate. All the affected parts were swollen, discharging copiously, and covered with crusted secretion and blood. The breath had a very feetid odour, and much of the tainted secretion was swallowed with food. There was marked deafness, apparently from occlusion of the Eustachian tubes; both corner were clouded by nebulæ, the result of long past corneitis; the liver was much enlarged and somewhat nodular to palpation. The family history, obtained from the boy's mother, left no possible doubt as to the presence of a specific element in the case. A curetting operation was now performed; this effected but slight improvement, and very soon the patient's condition was as bad as ever. At this point (12th April, 1895) the boy was admitted to the Victoria Infirmary, where he was treated by potas. iodid. and syr. ferri iodid. internally, with local treatment consisting of insufflation of boric acid and iodoform, and frequent washings and garglings with an alkaline wash. Little improvement was noted till the subcutaneous injection of tuberculin was begun. This was given at first in very minute doses,  $\frac{1}{100}$  of a milligramme, increased latterly to 8 milligrammes. The effect at first was inappreciable, but when the maximum dose was given the result was prompt and striking. There was the usual general reaction, temperature rising above 103° F., with headache, pains throughout the body, and general malaise; locally there was an enormous increase in swelling, the adjoining parts became red and inflamed, this being in a few days followed by a complete sloughing out of the diseased parts, the nasal bones and adjoining soft parts being discharged. leaving the nares with a scooped-out appearance, and raw, tender surfaces which soon granulated and healed. When cicatrisation was completed it was seen that externally the nose had disappeared, the nasal opening (a single, not double, opening) being flush with the cheeks, and presenting a firmly cicatrised edge; internally the parts were smooth and pale, while the posterior pillars of the fauces had become adherent to the posterior wall of the pharynx. The patient's general health had much improved, and he had increased in weight.

On two subsequent occasions in the course of the year (1895) the boy was in the Victoria Infirmary, with signs of slight relapse, when the same line of treatment, including the use of tuberculin, had the same happy effect. When the patient had left the Infirmary it was felt that some attempt should be made to make good the defects caused by the very extensive loss of tissue—in particular, to close the opening in the hard palate (which interfered so much with speech and

swallowing), and to form an external artificial nose. This aspect of the case was dealt with, most successfully, by my friend, Dr. James Forrest, dentist, Govanhill. An upper dental plate of the usual kind was made, on the front of which two incisor teeth, which the patient had lost, were replaced; on the upper surface of this plate was a projection which filled up the opening in the hard palate, while from this projected upward a metal slot, the opening in which ran from before backward. A nose was fashioned of light vulcanite material and coloured by hand; from the back of this nose a metal stem projected, and slipped directly into the slot on the upper surface of the palatal plate. In this way the nose and the palate supported each other mutually. The nose was further kept in position by a pair of spectacle frames fitted with plain glass.

The patient, as shown at the meeting of the Society, was in excellent health, his appearance much improved by the artificial nose and palate, while the parts formerly affected were

soundly and firmly cicatrised.

The patient's hearing was afterwards attended to by Dr. J. Kerr Love. It was noted that on several occasions a sharp cracking sound had been heard, and that this was followed by much improved hearing, lasting for a day or two. Acting on this hint, and devising suitable means for inflating the middle ear, the patient became much less deaf, and could hear ordinary conversation when shown at the meeting of the Society.

Remarks.—In this case the syphilitic constitution of the patient was beyond question; the opinion that a lupous (ortubercular) element had been superadded was based entirely on the immediate and very striking effect produced by the

use of tuberculin.

Dr. Renton asked if Dr. Napier had had relapses in such

cases; in his own experience relapses were common.

Prof. M'Call Anderson was glad the case was brought forward, as it was interesting in itself, and the result obtained supported the treatment of disease by tuberculin. Failures at first brought the remedy into disrepute; this case supported his view that tuberculin is a valuable remedy in tubercular affections. He also said that, to prevent relapses, anti-strumous remedies should be employed as well as tuberculin; by so doing much better results could be obtained.

Dr. Napier said he quite agreed with Prof. Anderson, and

he always combined the two methods.



#### IV.—CREOSOTE POISONING IN A CHILD.

#### By Dr. Cowan.

On Friday evening (4th December, 1896), a girl, æt. 3 years, was brought in a more or less unconscious state to the Children's Hospital. The history given was as follows:—She had had her tea between 5 and 6 o'clock, and shortly after 7 P.M. had taken a drink out of a bottle which contained some creosote, procured for the relief of toothache. She immediately complained of pain, first in her mouth, then in her abdomen, and within thirty minutes "fell asleep." She was brought to the hospital about an hour afterwards.

On admission she was much collapsed and almost wholly unconscious. Her pulse was very small and soft, and her extremities were cold, while respiration was easy and quiet. She lay in bed on her face, with her legs flexed on the abdomen. The pupils were contracted strongly. There was no sign of

any corrosive action about the lips or mouth.

The stomach was at once washed out with tepid lime-water until the return fluid ceased to smell of creosote. There was a considerable quantity of semi-digested food in the stomach, and this smelt strongly of creosote. The act of introducing the tube caused slight vomiting, and made her pupils dilate a little, and she bitterly resented the interference, moaning and struggling. She was evidently suffering severe abdominal pain. At 9 P.M. the rectal temperature was 96.4°, and her pulse numbered 108, and, though somewhat stronger than on admission, was still very weak and soft. Respirations numbered 24. By 2 A.M. she was much better, quite conscious, and with no abdominal pain, and by 6 A.M. her temperature had risen to 99.2°. During the night she vomited four times, and once a few small streaks of blood were noticed in the vomited matter. Next morning she vomited once, but no blood was present.

On examination next morning the fauces were slightly congested, but not painful, nor did she complain of any abdominal tenderness on palpation. The temperature was 99.2°, pulse 128 and of good quality, respirations quite easy and quiet.

There was some rhonchus audible all over the chest.

Since then she has been very well in every way, and the catarrhal symptoms were quite absent on the 10th December. She never vomited again, nor was there ever any evidence of blood in the motions.

She passed urine in bed during the washing out of her No. 2.

stomach; this was probably normal. At midnight, 4 A.M., and 6 A.M., she passed the specimens of urine which are shown. These were black in colour, with a faint green tinge; the depth of colour has not altered, but the green tinge has now gone. The succeeding specimens of urine gradually became lighter in tint, and in the afternoon of Saturday a perfectly normal specimen was passed, but for three days afterwards the urine was occasionally of a smoky green tint, this apparently being present when the dilution of the urine was not excessive.

These dark green specimens gave no reaction with Fehling's solution or when boiled with the addition of a few drops of acetic acid, though several days later a trace of albumen was on two occasions noticed to be present in clear pale straw-coloured specimens.

In this case, from various circumstances, it has been quite impossible to estimate, with any approach to accuracy, the

quantity of creosote taken.

Cases where serious symptoms of poisoning have been caused by creosote are apparently rare, and I have only been able to find four fatal cases recorded. Purckhauer records a case where a child, 10 days old, was given 24 to 30 minims of creosote. Poisonous symptoms (collapse and coma) ensued almost at once, and death resulted in sixteen hours, being immediately preceded by convulsions.

Marland <sup>2</sup> records a case where an infant died in fourteen hours after taking an unknown quantity of creosote. The symptoms and *post-mortem* signs were those of irritant

poisoning.

In the Edinburgh Medical and Surgical Journal (lii, p. 150) a case is recorded where 2 drs. of creosote caused the death of an adult in thirty-six hours; and another fatal case is referred to in the Catalogue of the Army Medical Department, U.S.A.

Serious symptoms with ultimate recovery have been noted several times. The doses in these cases were large. A phthisical lady,<sup>3</sup> who was taking 2·4 grm. in the morning and at night, repeated the dose one forenoon and was unconscious for eight or nine hours afterwards. No renal manifestations occurred, but coarse râles were audible all over the chest. Stevenson 4 records a case where a woman was unconscious for

4 Guy's Hospital Reports, 1875, p. 150.



<sup>&</sup>lt;sup>1</sup> Friedreich's Blätter f. gen. Med., 1883.

Vierteljahrsschr. f. gen. Med., 1889.
 British Medical Journal (Epitome), 1892, p. 4.

eight hours after an unknown dose of creosote. In this case the urine was like milk and water with a little ink in it, but darkened rapidly when exposed to the air. In another case 1 a dose of 100 minims twice in one day caused unconsciousness, though later on in the case the patient took 165 minims twice daily without symptoms of poisoning.

In one of our hospitals, large doses of creosote (60 to 80 minims three times a day) have been given with perfect safety, but always well diluted (5 minims to 1 dr. of cod-liver oil or emulsion), and the dose was at first small and then gradually increased. In several cases, however, even with these precautions, nausea, vomiting, or diarrhea ensued before these large doses had been reached. In no case were dangerous

symptoms produced.

Dixon Mann<sup>2</sup> states that creosote will not produce a black colouration of urine. Mr. Macmillan informs me that until recently, practically all preparations of creosote contained some carbolic acid, and, of course, a similar reaction occurs with this drug. Recently, however, he says the creosotes in the market have been perfectly pure. In this case the creosote was said to have been mixed with oil of cloves and tincture of myrrh, but that either of these would produce a black colour of the urine seems improbable.

Dr. Napier said it was difficult to obtain a pure sample of creosote, and in this case the colour of the urine was due

probably to impurities in the creosote.

#### V.—CARD SPECIMENS.

#### By Dr. Bryce.

Dr. Bryce exhibited drawings of right and left popliteal space of a negro, showing popliteal space nearly covered with muscle—viz., the short head of the biceps repeating the condition seen in the gibbon. The biceps has a very rare additional insertion into the outer supra-condyloid ridge.

The interest of the observation is in connection with the character of the fossil femur discovered by Dubois in Batavia, which had a convex popliteal space like this femur, and hence was regarded by him as unlike any known human femur. It has since been proved that certain femora do show this character, and this specimen shows why.

<sup>1</sup> Freudenthal, New York Medical Record, 1892.

<sup>&</sup>lt;sup>2</sup> Dixon Mann, Forensic Medicine and Toxicology, p. 539.

## REVIEWS.

Deformities: A Treatise on Orthopædic Surgery for Practitioners and Advanced Students. By A. H. Tubby, M.S. Lond., F.R.C.S. Eng. London: Macmillan & Co. 1896.

This is a handsome volume of nearly six hundred pages, reflecting the highest credit on the author and the publisher.

The author, in his preface, states that the book is the outcome of several years' work, and his treatment of the subject shows how well his great opportunities have been utilised.

The volume treats of deformities under five sections, viz.:—
I, Deformities of the Spine; II, Deformities of Neck, Chest, and Upper Extremities; III, Rachitis and the Resulting Deformities; IV, Deformities of the Lower Extremity; V, Ankylosis, Congenital Displacements, Deformities Resulting

from Cerebral and Spinal Paralysis, Arthrodesis.

It is impossible, within ordinary limits, to review the book with that amount of detail which it fully merits, but a more or less full review of the chapters on "Pott's Disease" will show how thoroughly the author has done his work. The author takes exception to the name "angular curvature" as being a contradiction in terms, but the name is not a descriptive one, and serves well to mark the disease, and only confusion

will follow a needless multiplication of synonyms.

The disease is first defined, then Percival Pott's claim to the honour of first accurately describing the disease in 1779 duly appraised. The etiology is then fully discussed, and here due stress is laid on the large number of cases due to tuberculosis. We feel bound to take exception to his statement that the hereditary nature of tuberculosis is universally conceded, for, since the discovery of the tubercle bacillus, the very opposite is almost universally maintained. The lesion is localised, but only approximately, as the advanced stage of disease on postmortem examination permits only inferential knowledge of the primary focus; the nature of the lesion, the events of the inflammatory process, the natural methods of cure, and the results of spinal caries are fully treated. Under this last we have a careful account of deformity, the occurrence of abscess and tracking of pus, and of compression paraplegia with its underlying conditions and symptoms.

A whole chapter is devoted to the symptoms of spinal caries, the method of examination, and the diagnosis and prognosis

of the disease.

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Another chapter deals with the treatment of the disease and its complications. A brief but adequate description is given of syphilitic and of malignant diseases of the spine. important article on hysterical spine winds up the eighty-three pages on angular deformity. A short chapter gives an excellent summary of the physiology of the spinal column. Other conditions than caries causing kyphosis are dealt with; lordosis is succinctly treated, and then follows a comprehensive account, in nearly eighty pages, of scoliosis, its causes, resulting deformities, and treatment.

Section II devotes nearly seventy pages to deformities of neck, chest, and upper extremities, the article on wry-neck being specially worthy of mention. A short account is given of rachitic deformities, and nearly the whole of the remainder of the book, up to page 508, is devoted to the deformities of the lower extremity, the general scope and detailed treatment being worthy of high praise. Section V closes the volume with fifty pages on ankylosis, congenital displacements, deformities from cerebral and spinal paralysis, and arthrodesis, the latter being provided with a bibliography.

A long index of authors quoted is supplied, and a full index of subjects, and the volume is furnished with a good table of contents, and a list of illustrations, comprising 15 plates and

302 figures.

We have said enough to show that the volume is almost cyclopædic in character, and we can heartily recommend it as a guide to the recognition and treatment of deformities.

Bacteriology and Infective Diseases. By Edgar M. Crook-SHANK, M.B. Fourth Edition. London: H. K. Lewis. 1896.

This work, though in reality the fourth edition of Dr. Crookshank's Manual of Bacteriology, is practically a new book. It has been rearranged, enlarged, in great part rewritten, and in every way made a vast improvement on its predecessor.

The book has been divided into three parts. The first part, which is entitled "Theoretical and Technical," deals with the apparatus and the general methods employed in the study of bacteriology. An account is given of the biology of microorganisms, and of the conditions under which they best grow. Here, too, we have a chapter on the effects of antiseptics and disinfectants on various growths. Toxins, antitoxins, and the subject of immunity are all treated of in this part of the volume.

In Part II the more important infective diseases are dealt with. Here we have an enquiry into the etiology of the fevers—scarlet fever, measles, small-pox, typhus, typhoid, diphtheria, &c. There is also an account given of the bacteriology of such conditions as tuberculosis, leprosy, syphilis, glanders, anthrax, suppurative processes, and many other diseases met with in our domestic animals. Many of these conditions, especially those in animals, have been investigated by Dr. Crookshank himself. He gives us the results of his enquiry, and adds much valuable advice as to the prevention and stamping out of these diseases, all of which cannot but be of much use to veterinary surgeons and others having the care of our animals. The chapter on actinomycosis is specially to be noted as being written by one who has made this subject his own.

Part III contains descriptions of the various known microorganisms arranged in alphabetical order, and in an appendix the yeasts and moulds, and the various animal micro-parasites,

are described.

Of the book as a whole, so far as it goes, one cannot speak but in the highest praise. The descriptions of the various infective diseases found in animals are specially valuable, and are evidently written as the result of personal investigation. The third part of the book is necessarily much of a compilation, and as such it suffers. The descriptions of some of the organisms are rather meagre, and we think a little more detail in this section, as to the appearances of the growths in agar and gelatine plates, in bouillon and in milk, of the mobility of the organisms, of their staining with Gram, &c., might well have been added.

The book is well illustrated, well printed, and altogether makes a very handsome volume.

A Pharmacopæia for Diseases of the Skin. Edited by JAMES STARTIN. Fourth Edition. Bristol: John Wright & Co. 1896.

THE new edition of this convenient handbook requires little more than mention here. It consists mainly of directions for the application of the various remedies commonly employed in the treatment of skin disease. Vapour and medicated baths are described, and prescriptions are given for caustics, lotions, mixtures, pills, and ointments. Hints on diet and

meals are also furnished. The classification of skin diseases is a curious one. It is highly artificial, and we cannot recommend it even for the use of beginners. The author arranges skin diseases into twenty classes, some of which are as follows:—cachectic, chromatic, medicinal, parasitic, pustular, simulated, squamous, syphilitic, tubercular, ulcerous, and vesicular. It will at once be seen that a given case may be assigned to several classes. The classification, however, is not the important part of the work, and will not deprive the remainder of its value. The therapeutic index is a fitting complement to the prescriptions given in the body of the work.

Rough Notes on Remedies. By WILLIAM MURRAY, M.D., F.R.C.P. Lond. Second Edition. London: H. K. Lewis. 1897.

WE are not surprised that a second edition of this little work has been called for within a year. We were greatly struck by the practical nature of the work on reading the first edition. It is not a scientific book, but it is one which gives the results of a long experience of drugs in concise, interesting, readable language. Its value does not lie in its science, but in its suggestiveness. The author records his experience in an attractive way, and he leaves you to try what he has tried without in most cases attempting any detailed scientific explanation. Since reading the first edition we have put his remarks on the use of mercury in heart disease to practical test, and have been pleased with the results. We would advise every practitioner to read these rough notes.

Aids to Obstetrics. BY SAMUEL NALL, B.A., M.B., D.P.H. Cantab., M.R.C.S. Eng. Fifth Edition. London: Ballière, Tindall & Cox. 1896.

TIME was when little books like this were regarded with disfavour by our professors, but the increase of medical knowledge has made them necessary to the general student desirous of summarising the knowledge gained from large treatises and lectures.

The appearance of a fifth edition shows how the book is esteemed, and for the class of student referred to it may be.

without entering into wearisome detail, described as a fairly complete summary of obstetrics. As such, it has a distinct function, and its use may be recommended to the diligent student.

The Transactions of the Edinburgh Obstetrical Society. Vol. XXI. Session 1895-96. Edinburgh: Oliver & Boyd. 1896.

AGAIN the Edinburgh Obstetrical Society are to be congratulated on the present volume—the twenty-first of their Transactions.

The papers are almost without exception of a very high order. Amongst those of most value—we mention them in the order in which they are placed in the index—are the papers by Dr. J. W. Ballantyne on "Teratogenesis: an Inquiry into the Causes of Monstrosities." In three papers on the subject the author considers "the theories of the past" as regards causation. Dr. Berry Hart's paper on "The Development of the Clitoris, Vagina, and Hymen," characterised as a "preliminary note" on the subject, and Dr. James Ritchie's exhaustive paper on "Osteomalacia," are both of great interest.

· A most valuable contribution to the subject of axis traction forceps is furnished by Dr. Milne Murray. As Dr. Murray points out, every form of axis traction forceps is constructed. as regards the traction part of the instrument, to suit the formation of a normal pelvis. Allowance is not made for deviations from the normal, especially for deviations from the normal obliquity of the "plane of the brim." Consequently. to overcome this defect, traction must be exerted with the present instruments farther back or farther forward, according as the obliquity of the "plane of the brim" is greater or less than the normal. The modification that Dr. Murray would now make in his own particular form of forceps is an attempt to overcome the defect indicated. Unfortunately space does not permit us to describe it. Some other points are taken up in the paper, but they are of less importance. The other papers we desire specially to mention are Dr. Halliday Croom's on "Mittelschmerz," Mr. Martin's (of Birmingham) on "Pan-Hysterectomy," Dr. Lachie's on "Puerperal Pulmonary Thrombosis," and Surg.-Capt. Bedford's on "Criminal Abortion in the Punjaub."

In addition to the papers, description of specimens, &c., the present volume is of special value, as it contains a complete index to the twenty-one volumes of the Society's Transactions.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

## MEDICINE.

By W. R. JACK, B.Sc., M.D.

Changes in the Spinal Cord in a Case of Thrombosis of the Abdominal Aorta.—Helbing (Deutsche Med. Wochenschrift, 15th October, 1896) refers to the well-known paralysis of the hind limbs, due to changes in the cord, which occurs in rabbits after closure of the abdominal aorta. Such changes have not yet been observed in man. He therefore describes the

following case, in which the cord was carefully examined:—
W. H., æt. 37. History of frequent attacks of rheumatism. In June, 1895, sudden paralysis of both legs, the left recovering slowly. Three days afterwards lividity and swelling of right leg, which became cold and insensible. Bedsore on right gluteal region, leading to gangrene of the entire muscular structure. Commencing gangrene of right thigh. Death in thirty-nine days. Post-mortem:—Embolus riding on the division of aorta into common iliacs; thrombus extending 5 cm. upwards and 5 cm. downwards into common iliacs. Multiple emboli in lungs and spleen, granular kidneys, parenchymatous degeneration of heart and liver, chronic gastritis and endarteritis. The softened atump of the right sciatic nerve was exposed in the floor of the gluteal bedsore. There were no macroscopic changes in the cord or membranes.

After hardening, the cord was examined microscopically, with the following result :- In the lumbar cord, advanced degeneration of anterior and posterior roots, more marked on the right. Degeneration of the fibres of the grey matter, associated with that of the roots. Alterations in the ganglion cells in both anterior cornua. Marked degeneration of posterior columns, especially the right. Slight diffuse degeneration of the antero-lateral columns. In the rest of the cord, ascending degeneration of the right column of Goll.

Discussing the origin of these changes, Helbing refers to the experiments of Erhlich and Brieger. They ligatured the abdominal aorta in rabbits for one hour, and found, six weeks afterwards, complete sclerosis of the grey matter and extensive degeneration of the antero-lateral tract. The anterior pyramidal column and the cerebellar tract were unaffected, as were the posterior columns, the posterior roots, and the spinal ganglia. The anterior roots were completely degenerated. Similar results were obtained by other observers.

The spinal ganglia, therefore, appear to offer greater resistance to anæmia, as their blood supply is evidently not entirely independent of the abdominal aorta. But the lumbar part of the cord has a less efficient blood supply than any other. Carrington tried to inject the vessels of the cord from the crural artery. Only the anterior spinal artery was filled; the vessels coming from

the lumbar arteries remained empty.

In Helbing's case, although both lower lumbar arteries were closed for five and a half weeks, the degeneration, even in the lowest part of the lumbar cord, was not complete, and, in contrast to the experimental results, it was most marked in the posterior roots and columns. He thinks that the necrosis of the right sciatic nerve and the gangrene of the right leg have more to do with its production than the thrombosis of the aorta, and associates it with the degeneration occurring after amputations. This theory would explain the degeneration of the anterior and posterior roots, its continuation in the anterior and posterior cornua and the posterior column, and the ascending The changes in the ganglion cells and the slight degeneration degeneration. of the lateral columns might be due to anaemia of the lumbar cord (resulting from the thrombosis), but they may also be the result of the chronic nephritis and the cachexia induced by it. It is at least doubtful whether the lumbar cord in man depends for its nutrition so much on the abdominal aorta as the experiments on rabbits would seem to indicate. It is desirable that the condition of the spinal cord should be investigated in future cases of the kind.

Cerebral Paralysis in a Child, complicating Influenza.—Loeb (Deutsche Med.-Zeitung) relates the following unusual case:—F. R., æt. 9 months, was attacked in December, 1891, with cough and fever, accompanied, after a few hours, by twitchings of the left arm and leg, and twitching of the face which made suckling impossible. But for slight occasional diarrhea, it had been previously healthy. Next day the temperature was 40.5° C., the twitchings were limited to the left side, the child was unconscious, with dilated pupils, which reacted to light. Urine normal. Sibilant râles over both lungs.

After five days the temperature fell and the convulsions ceased, leaving paralysis of the left arm and leg, and the lower branch of the left facial. The mouth was drawn to the right. Catarrhal pneumonia of both lungs followed,

but in three weeks had disappeared.

A year afterwards, in spite of treatment by faradism, the condition persisted. There was still a trace of facial paralysis; the left fore-arm and the hand were paralysed, and showed slight contracture. Painful spasms were not infrequent. The left leg was thinner than the right, and the gait was spastic, though there was not much actual loss of power. The right tibia had become curved from the weight of the body falling constantly upon it alone.

In March, 1896, the child was noted to be somewhat backward. She could not pick up small objects with the left hand. The attempt induced associated movements of the right. A moderate contracture persisted. The left fore-arm was shorter, thinner, and colder than the right; the left leg slightly shorter

than the right leg. The left knee-jerk was exaggerated.

The case was undoubtedly influenza, beginning, as it did, with a diffuse bronchitis passing into broncho-pneumonia. Its long duration also pointed in this direction. It occurred in the middle of an epidemic; the four year old brother had the disease a few days before, and the father a few weeks afterwards. The cerebral lesion was probably either a cortical hæmorrhage or an encephalitis. Hæmorrhagic encephalitis is not rare in the adult as a complication of influenza, but extremely rare in children. The author has been able to find only one recorded case (Kohts, Therap. Monatshefte, No. 12, 1890).

Urea as a Therapeutic Agent. — Klemperer (Deutsche Med. Wochenschrift, 19th November, 1896) finds that urea in large doses has a very marked diuretic effect, and retains uric acid in solution. He has used it for over a year, and gives a summary of the results in fifty-seven cases. He begins with a 5 per cent solution, and gives half an ounce every hour. In two days this is increased to a 7½, in two days more to a 10 per cent solution. It is generally well borne, though diarrhæa sometimes occurs. This, however, rather aids the objects for which it is given. He gives the drug, as a rule, for fourteen days, in which time 200 to 250 grms. are taken; but he has given much larger quantities. It is useless in affections of the kidneys, as it acts directly on the renal epithelium. Where this is damaged, its diuretic effects are not manifested.

The best results have been obtained in ascites and pleurisy with effusion, over 5 litres of urine being sometimes excreted for days together, with rapid disappearance of the effusion. In diseases of the heart the results were variable. In some cases cedema disappeared very rapidly, in others the benefit was trifling or altogether absent. The variation depends on the degree of activity of the renal epithelium. Renal albuminuria, therefore, contraindicates the employment of urea. Klemperer recommends its employment, if other drugs fail, in all cases of dropsy and ascites. If there be no good results within five days it may be discontinued.

With regard to its action as a solvent of uric acid, he finds it of the greatest value in cases of stone in the kidney. It should not be given during an attack of renal colic or of hæmaturia. It is not to be recommended in gout, as the uric acid is so intimately united with the inflamed and necrosed tissues that

no solvent substance is able to wash it out of them.

## DISEASES OF THE EAR.

By Dr. WALKER DOWNIE.

A Clinical Study of Twenty-one Thousand Cases of Diseases of the Ear, Nose, and Throat. By Seth S. Bishop, M.D., LL. D. —This communication consists chiefly of a statistical table, the material being supplied by cases treated during the past seventeen years at the Illinois Charitable Eye and Ear Infirmary, Chicago. The compiler's first object was to determine the influences, if any, exerted by occupation, age, and sex in the causation of diseases of the ear, nose, and throat. Then the condition of each patient, at the time he first presented himself for treatment, is noted to determine the relative frequency of the different diseases. About 34 per cent of the patients had out-door occupations, while 66 per cent were in-doorsthat is, about twice as many with in-door as with out-door occupations. The largest number of any one class were in-door workers, namely, 3,045 domestic Next in frequency were 1,508 day-labourers (out-door). appears, from the data given, to have no influence in the production or prevention of diseases of these organs. Up to the age of 15 years both sexes appear to suffer nearly equally; beyond that age females predominate. In the early period—under 15—the lives and habits of the sexes are very similar; beyond that age they enter upon bread-earning vocations, with a consequent divergence in their habits and surroundings. In aural cases the relative frequency in which the two ears are affected is enquired into, and the table shows that in acute inflammation of the middle-ear there is a very slight difference in the frequency of involvement between the two ears, and that both ears were affected in 24 per cent of all cases. In nearly 6,000 cases of chronic non-suppurative inflammation of the middle-ear, the two sides were affected about equally, and nearly 82 per cent of all the cases presented bilateral aural affection. The important deduction to be derived from this is that when one ear has become severely affected by sclerosis the other tends to become similarly involved. In chronic suppurative otitis media the two ears suffer nearly equally. It is stated that about 13 per cent of all ear cases had naso-pharyngeal disease, but, in passing, it may be said that until very recent years aurists rarely examined the naso-pharynx, and this figure cannot be accepted as correct. About 0.8 per cent had disease of the mastoid process in the proportion of two males to one female; and of the 21,000 cases 0.5 per cent were deaf-mutes, there being three times as many males as females.

Twenty-nine per cent, or more than one-fourth of all the cases, were under 15 years of age, many of whom dated the aural affection back to attacks of scarlet fever, measles, or "running-ears" of infancy. Only about 10 per cent of the children, and about 13 per cent of the adults, were seen while suffering from the acute stage of the aural affection.—(Journal of the American

Medical Association, 26th September, 1896.)

Acute Suppurative Inflammation of the Middle-Ear followed by Acute Mastoiditis and Abscess of the Neck.—Dr. Bishop here narrates a case illustrative of a condition frequently seen by aurists. An adult complained of severe pain in one ear, and on examination the membrane of the affected ear was seen to be bulging, indicating retention of fluid within the tympanum. This was evacuated and pain relieved by an incision in the posterior segment of the membrane. The incision closed within a few days, and this premature closure was followed by tenderness over the mastoid, and swelling and tenderness over the sterno-mastoid region. A modified Stacke operation on the mastoid was performed, and the neck abscess opened.

[The persistent tendency of the drum-head to heal after paracentesis is well known, and when this very necessary operation is resorted to for the relief of intra-tympanic retention, the incision should be as long as circumstances

permit; it should be so situated as to ensure perfect drainage of the cavity, and the incision should be kept open by frequent inflation. -J. W. D.l.-(The Laryngoscope (St. Louis), September, 1896.)

Archives of Otology.—The following is a list of the original papers which appear in the third number of the Archives of Otology for 1896:-

1. "A Case of Acute Otitis Media followed by an Abscess in the Temporo-Sphenoidal Lobe-Operation-Death from Shock-Autopsy." By Gorham Bacon, M.D.—The patient was a man, aged 25, who had had a slight discharge from the left ear for some weeks. The seat of the disease was found to be in the attic, and this was incised and a few drops of pus evacuated. This incision was repeated on several occasions with a like result. Left-sided headache, tenderness on pressure over the mastoid, and latterly loss of memory for names and objects supervened. Brain abscess was suspected; the mastoid antrum was opened; a fortnight later, abscess in the temporo-sphenoidal lobe was diagnosed, and an operation was then performed; patient died apparently from shock about two hours after operation. There are two photo-illustrations -one of the bone showing the carious opening in the tympanic roof, and the other of the brain showing the primary abscess cavity connected with the sinus in the tympanic roof and a secondary abscess cavity in the temporosphenoidal lobe.

2. "The Operation of Mastoid Antrotomy for the Cure of Chronic Middle-Ear Catarrh, with Description of the Author's Antrotome." By H. A. Alderton, M.D.—The chief object of this communication is to describe the author's antrotome and its application. It is a hand drill, with a canula containing a spring probe. When about to be used this second portion is passed through the external meatus, and the curved point, which is turned up towards the antrum, acts as a guide to that cavity, and is so arranged that the drill can only penetrate up to within one-eighth of an inch of the watch-

spring probe. The paper is illustrated.
3. "Two Cases of Sarcoma of the Middle-Ear." By Wm. Milligan, M.D.— In these two cases there had been suppuration for years, and spontaneous hæmorrhage had frequently occurred. The growths were ashy-grey and fleshy-looking, suggestive of malignant disease, and this suspicion was con-

firmed by microscopic examination.

4. "A Case of Temporo-Sphenoidal Abscess Secondary to Acute Left-sided Suppurative Middle-Ear Disease-Operation-Acute Hernia Cerebri-Death." By W. Milligan, M.D.-Two points of interest may be noted in connection with this case of intra-cranial abscess. First, its being secondary to acute otitis media, the majority of such cases being consequent to a chronic suppurative middle-ear affection; and, second, the occurrence of a hernia cerebri about two months after operation. This latter increased rapidly, symptoms of basal meningitis supervened, and the patient died. The abscess cavity post-mortem was found empty and shrunken, along with evidences of a diffuse basal lepto-meningitis.

5. "A New Method of dealing with the External Meatus in Operations on

Mastoid" is described and figured by Richard Lake, F.R.C.S.

6. "The 'Mastoid' Antrum a part of the Middle-ear." By Arthur H. Cheatle, F.R.C.S.—He urges (1) that the antrum is a regular part of the middle-ear, as seen by its development, and as such is wrongly described as "mastoid" antrum; the name, tympanic antrum, would be more accurate, and would serve to dissociate it from the mastoid process and to define it as part of the middle-ear; (2) that as it is part of the middle-ear, the imaginary division of the petro-mastoid into two parts is anomalous; and it would be better to describe the petro-mastoid as one bone.

7. "On the Present Status of the various Tests for Hearing." By Professor Bezold, of Munich.—This is followed by the usual report on the "Progress of Otology "during the first quarter of the year 1896, and a condensed report of

the proceedings of the Austrian Otological Society, February, 1896.

## GYNÆCOLOGY AND OBSTETRICS.

BY E. H. LAWRENCE OLIPHANT, M.D.

The January number of the new Scottish Medical and Surgical Journal has now been published, and contains two articles on this branch of medical science, and an abstract of recent literature in gynæcology. It also gives abstracts from the records of meetings of societies throughout Scotland, and

several of these refer to midwifery.

Professor Stephenson, of Aberdeen, contributes an article on the management of labour in twin pregnancies, apparently the first of a series of "Studies in Practical Midwifery." He shows that the early teaching was in favour of proceeding to deliver the second child immediately after the birth of the first. But since the publication of Denman's work in 1795, it has been held that after the birth of the first child our duty is to wait for the recurrence of pains and the expulsion of the child by the natural powers. Delay has been represented as rather beneficial than otherwise, by allowing the system time to rally from the fatigue of the first labour before entering on the second, and also by averting the dangers dependent upon an uncontracted uterus, likely to arise from too hasty extraction of its contents. Denman taught that we ought to wait for four hours before proceeding to artificially deliver the patient of the second child. Modern opinion has shortened the period, but still advises, in the text-books at any rate, that half an hour should elapse before rupturing the membranes of the second child, if these are still intact. The older practice of the best authorities before Denman's time is not even mentioned by modern writers, and Dr. Stephenson in this article endeavours to show that the analysis of clinical data is in favour of the older practice. Chapman (1735) and Ould (1742) were in favour of immediate artificial delivery. Burns, of Glasgow, followed the practice of Smellie (1752), which was more discriminating. This was to leave the patient alone if there was no apparent danger, with good pains, and the child presenting by the head; otherwise Smellie taught that the child should be at once turned, and in any case if the membranes remained unruptured. Dr. Stephenson discusses more modern teaching at home and abroad, and leaves for a subsequent paper the analysis of three series of cases in the Dublin Lying-in Hospital. He concludes the present paper by laying down several propositions, including these beliefs:— That multiple pregnancy is abnormal and comparatively dangerous; that the risks arise more suddenly than is usually recognised; and that the dominant idea should be not that the labour is doubled, but that the delivery is incomplete, with all the risks attendant on such a condition.

Dr. Ballantyne contributes an abstract of his address, as President of the Edinburgh Obstetrical Society, on the use of chloroform in labour. He discusses the apparent immunity from danger in labour, and refers to a dozen or so cases where danger was apprehended from failure of respiration, and to eight collected cases of death during anæsthesia; but he concludes that these last may not have been due to the chloroform, but rather that it is a question how far chloroform may prevent death during labour. He concludes by recommending chloroform for general use in obstetric practice in preference to ether. It ought to be administered simply but carefully, with a due regard to its effects, especially on the respiration; it should be given only during pains till the head is on the perineum, and then to full unconsciousness. After the birth of the head chloroform should usually be stopped. He proceeds to lay down the propositions that we are always justified in giving chloroform in normal labour, and should offer it; that it is our duty to do so in all severe labours, including operation cases; that it is specially valuable when the heart and blood-vessels are diseased, and in such cases is often necessary to save life; that in exhaustion, from hæmorrhage and other causes, ether may be preferred, and that great caution is advisable in cases of general

emphysema of the lungs.

The abstracts from current literature are of general interest, but a German case of unusual nature is recorded. The patient died after an intra-uterine injection of zinc chloride. She is described as a 21 year old "millipara" (sic). The reporter must have been related to the hen farmer in Arkansas who, having heard that some fish laid eggs by the thousand, thought he might make his fortune by crossing a bantam with a cod.

The Best Method of Teaching Obstetrics. Aids in Obstetric Teaching.—Under the above titles Dr. J. C. Edgar contributes a series of original articles to the New York Medical Journal for November and December, 1896. These articles are well worthy of the attention of all interested in obstetric teaching. Some of the suggestions are, it is true, better adapted for American than British methods, but even a Scottish teacher might get some useful hints. Dr. Edgar proposes to spread the course of midwifery over two or three years of the student's curriculum. He proposes, to a large extent at any rate, to do away with the so-called systematic lecture, replacing it by tutorial work and practical demonstrations these last to be partly clinical, in a hospital or out-patient department, and partly on models in the class-room. In addition to a large number of drawings of deformed pelves, he gives some seventy illustrations, chiefly from photographs, of his apparatus. He gives full descriptions of the methods of making cheap models in paper and glue. These, he says, are cheaper and more durable than papier maché, which is apt to be brittle. He demonstrates the artificial dilatation of the cervix by means of models cast in glue and glycerine. Leather and rubber are also used. Real pelves as well as plaster casts are rendered more durable by electroplating in copper; they may afterwards be painted. Even real pelves can in this way be made free from any suspicion of sepsis. He even has electroplated plaster casts of torn perineums, showing the stitches in process of being passed. Apart from their interest to the teacher, many of the illustrations are of interest to the ordinary obstetrician, as, for example, that of bimanual dilatation of the cervix.

Anterior Colpotomy.—There is, in the Transactions of the London Obstetrical Society for 1896, an abstract of a paper by Dr. John Phillips on this operation, which he defines as opening the peritoneal cavity through the anterior vaginal cul-de-sac. It has only lately come into prominence as an operation per se, but as an early stage of two other procedures it has been well known for some time—as the initial step of vaginal hysterectomy and of vaginal fixation. During the performance of these the operator must be struck by the ease with which he can usually explore the uterine surfaces, the tubes and ovaries, and the true pelvis, through the opening in the anterior cul-de-sac; the longer the index finger the more complete is the knowledge obtained. Personally he always pulls down tubes and ovaries on both sides, if possible, in total extirpation, and examines them by palpation and inspection,

irrespective of their subsequent removal or not.

He proceeds to describe the technique of the operation, laying special stress on the thorough "scrubbing" (sic) out of the vagina with a round-headed brush and a one per mille sublimate solution. This is specially necessary in nulliparous women with rugose vaginas. Previous curetting and packing of the uterine cavity with iodoform gauze is advisable if there be foul discharges. Dr. Phillips himself prefers a transverse incision, but Martin and others stretch the vaginal wall and make a longitudinal incision into the cul-de-sac; they say that the ureters by this method are less liable to injury. When the cellular tissue between bladder and uterus is reached, this is broken down by the forefinger until the peritoneum is reached. By this means the ureters are pushed aside. He prefers to work without a retractor to keep the bladder up. On opening the peritoneum, and pulling down the uterus with a volsellaforceps, the index finger may be carried over the fundus to palpate the adnexa or break down adhesions, and by inserting a speculum into the vagina the adnexa may be inspected.

Among the illustrative cases he mentions one where in this manner he broke down adhesions at the back of the uterus and inspected and returned the ovaries; vaginal fixation was carried out, and the operation concluded. The patient was relieved of her dysmenorrhæa, but had some frequency of micturition. The second case is that of a nullipara, aged 30, who had been under observation since an attack of pelvic peritonitis six years previously. By anterior colpotomy the tubes and ovaries were separated with much difficulty; one ovary was torn in the process and was removed, whilst the other was returned. The patient was entirely relieved of her symptoms, but the case was too recent to allow of an opinion being expressed as to the ultimate result.

Among the advantages he claims for this method are:—No hernia, and less likelihood of formation of adhesions with the intestines; greater simplicity and rapidity in performance; shorter convalescence and less sickness after operation; no necessity for a drainage-tube. For the performance of the

operation the patient must have a normal pelvis.

In the discussion which followed, Mr. Malcolm pointed out that the operation was practicable only in simple cases which gave no trouble in abdominal work, and Dr. Champneys suggested that cases where this method could be easily carried out were cases not requiring operation. In this connection we may remark that Dr. Stirton lately read a paper on operations per vaginam, adding the weight of authority and long experience in favour of vaginal operations wherever practicable, in preference to opening the anterior abdominal wall.

## Books, Pamphlets, &c., Received.

A Simple Method of Water Analysis, by John C. Thresh, M.D. London: J. & A. Churchill. 1897. (2s. 6d.)

A First Series of Fifty-four Consecutive Ovariotomies, with Fifty-three Recoveries, by A. C. Butler Smythe, F.R.C.S. Ed. London: J. & A. Churchill. 1897. (6s. 6d.)

Diphtheria and Antitoxin, by Nestor Tirard, M.D. Lond. London:

Longmans, Green & Co. 1897. (7s. 6d.)

The Practitioner: a Journal of Practical Medicine, edited by Malcolm Morris. New Series. Vol. III. London: Cassell & Co., Limited. 1896.

The Retrospect of Medicine: a Half-yearly Journal, edited by James Braithwaite, M.D., and E. F. Trevelyan, M.D. Vol. 114. London: Simpkin, Marshall, Hamilton, Kent & Co. 1897.

The Climate of Bournemouth in Relation to Disease, specially Phthisis, by A. Kennedy-Morgan, M.D. Bristol: John Wright & Co. 1897. (1s.)

Verhandlungen der Berliner medicinischen Gesellschaft aus dem Jahre 1896. Band XXVII. Berlin: L. Schumacher. 1897.

The Natural and Artificial Methods of Feeding Infants and Young Children, by Edmund Cautley, M.D. London: J. & A. Churchill. 1897. (7s. 6d.)

The Year-Book of Treatment for 1897. London: Cassell & Co., Limited. 1897.

Index Catalogue of the Library of the Surgeon-General's Office, U.S.A. Second Series. Vol. I, A to AZ. Washington. 1896.

# GLASGOW.-METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 23rd JANUARY, 1897.

		Week Ending				
		Dec. 26.	Jan. 2	Jan. 9.	Jan. 16.	Jan. 28.
Mean temperature, .		36·4°	42.6°	40·3°	34·0°	32·0°
Mean range of temperate between day and night,	ure •	10·4°	10·7°	7·3°	7·8°	11 <b>-0</b> °
Number of days on whitrain fell,	ich	5	5	3	3	3
Amount of rainfall, . is	ns.	0.95	2.47	0.80	0.20	0.12
Deaths registered,		352	322	356	323	397
Death-rates,	.	26.0	23.7	25.9	23.5	28.9
Zymotic death-rates, .	.	5.7	4.8	5.3	4.2	4.9
Pulmonary death-rates,		8-0	7:0	7.7	7.4	8.6
Deaths—		70	00			40
Under l year,	.	70	68	74	59	68
60 years and upwards,	<u> </u>	63	61	57	49	77
DEATHS FROM— Small-pox,					•••	
Measles	.	41	44	41	25	32
Scarlet fever,	.	5	2	5	1	3
Diphtheria,	.		1	2	2	4
Whooping-cough, .	.	20	12	14	23	20
Fever,	.	2	1	2	3	4
Diarrhœa,	.	8	5	9	4	4
Croup and laryngitis,	.	•••	3	4	4	1
Bronchitis, pneumonia, a	nd					
pleurisy,	•	85	67	75	71	83
Cases reported— Small-pox,						
Diphtheria and membrano	ous					
croup,		15	18	24	5	11
Erysipelas,	.	23	<b>35</b> .	24	30	27
Scarlet fever,		62	56	48	55	59
Typhus fever,	.	1		•••	1	•••
Enteric fever,		6	12	16	11	11
Continued fever, .	.					•••
Puerperal fever, .	.	3	2	3	4	1
Measles,*	.	518	365	325	380	307

<sup>\*</sup> Measles is not notifiable.



### THE

## GLASGOW MEDICAL JOURNAL.

No. III. MARCH, 1897.

## ORIGINAL ARTICLES.

## THE JUBILEE OF ANÆSTHETIC MIDWIFERY.

An Inaugural Address to the Glasgow Obstetrical and Gynæcological Society, on Tuesday, 19th January, 1897, by the Honorary President.

By A. R. SIMPSON, M.D.,

Professor of Midwifery in the University of Edinburgh.

MR. PRESIDENT AND GENTLEMEN,—My first duty in meeting you to-night is to offer you my hearty thanks for the distinction you have conferred on me in electing me as your honorary president. It is a high honour to preside over a Society which, though young in years, has already made valuable contributions to the progress of obstetrics and gynæcology, and it affords me peculiar gratification to be brought into this pleasant relationship, alike with the younger workers in the field and with the older obstetricians whose friendship I had the happiness to gain during the years when I was a practitioner of medicine in Glasgow from 1865 to 1870.

I am well disposed to believe that these former friendships have conspired with your generous appreciation of what work I may have done, or encouraged younger men to do, in leading you to pay me this welcome compliment. But whenever I am called to occupy the presidential chair of an obstetrical society, it always comes back to me that there's more in a name than

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Shakespeare's lovelorn Juliet was willing to allow; and I have fancied that some of you thought it fitting that the session that should see the jubilee of anæsthetic midwifery should have a Simpson for its honorary president. So, though the subject has been already treated very ably and appropriately by Dr. Ballantyne in his inaugural address to our Edinburgh Obstetrical Society, you may desire that I should still take it as the topic of my dissertation now.

## THE FIRST ANÆSTHETIC LABOUR.

I proposed to your secretary to meet you to-day, because it was on a Tuesday, the 19th of January, fifty years ago, that J. Y. Simpson first made a woman in labour breathe the vapour of sulphuric ether and delivered her in her sleep. The case and its results were stated publicly on the following day—first to his class in the University, and later in the evening to his brethren in the Obstetrical Society. In the February number of the Edinburgh Monthly Journal for Medical Science some details were published; and in "Notes on the Inhalation of Sulphuric Ether in the Practice of Midwifery," which appeared in the March number of that Journal, it is more fully recorded thus:—

"The first case in which I employed the ether vapour occurred on the 19th of January. The pelvis of the mother was greatly contracted in its conjugate diameter from the projection forwards and downwards of the promontory of the sacrum; the lumbar portion of the spine was distorted, and she walked very lamely. The present was her second confinement. Her first labour had been long and difficult; she began to suffer on a Monday, and, after a protracted trial of the long forceps, was at last delivered by craniotomy late on the subsequent Thursday night. Even after the cranium had been fully broken down, a considerable time and much traction had been required to drag the diminished and mutilated head of the infant through the contracted brim of the pelvis, and she was long in recovering. Contrary to the urgent advice of her medical attendant, Mr. Figg, he was not made aware of her present or second pregnancy till she had arrived at nearly the end of the ninth month. It was thus too late to have recourse to the induction of premature labour, which had been strongly pressed upon her as the only means of saving her child, should she again fall in the family way. The pains of her second labour commenced in the forenoon of the 19th. saw her with Mr. Figg at 5 o'clock in the afternoon, and

again at 7 o'clock. The os uteri was pretty well dilated, the liquor amnii not evacuated, the presenting head very high, mobile, and difficult to touch; and a pulsating loop of the umbilical cord was felt floating below it in the unruptured

bag of membranes.

"From 5 to 9 o'clock the pains seemed only to push the circle of the os uteri further downwards, without increasing its dilatation or making the head in any degree enter into the pelvic brim. Assisted by Dr. Zeigler, Dr. Keith, and Mr. Figg, I shortly after 9 o'clock made the patient inhale the ether vapour. As she afterwards informed us, she almost immediately came under the anodyne influence of the ether. consequence of doubts upon this point, its use was continued for nearly twenty minutes before I proceeded to turn the infant (as I had previously predetermined to do). A knee was easily seized, and the child's extremities and trunk readily drawn down; but extreme exertion was required in order to extract the head. At length it passed the contracted brim with the anterior part of its right parietal bone deeply indented by pressure against the projecting promontory of the sacrum, and the whole cranium flattened and compressed laterally. The infant gasped several times, but full respiration could not be established. The transverse or biparietal measurement of its head, at the site of the indentation, was, in its compressed state, not more than 21 inches. Hence we judged the conjugate diameter of the pelvic brim not to exceed this. The infant was large, and rather above the usual size. It weighed 8 lb. On afterwards examining the head and removing the scalp, no fracture could be found at the seat of the indentation. thin parietal bone had merely bent inwards.1

"On questioning the patient after her delivery, she declared that she was quite unconscious of pain during the whole period of the turning and extracting of the infant, or, indeed, from the first minute or two after she first commenced to breathe the ether. The inhalation was discontinued towards the latter part of the operation, and her first recollections on awaking were 'hearing,' but not 'feeling,' the head of the infant 'jerk' from her (to use her own expressions), and subsequently she became more roused by the noise caused by the preparation of a bath for the child. She quickly regained full consciousness, and talked with gratitude and wonderment of her delivery, and her insensibility to the pains of it. Next day I found her

<sup>&</sup>lt;sup>1</sup> The skull and casts of the infant's head are preserved in the Obstetrical Museum in the University of Edinburgh, and were exhibited at the meeting.

very well in all respects. I looked in upon her on the 24th (the fifth day after delivery), and was astonished to find her up and dressed, and she informed me that on the previous day she had walked out of her room to visit her mother. Mr. Figg informs me that her further convalescence has been uninterruptedly good and rapid."

## INAUGURATION OF THE ANASTHETIC ERA.

"Abundant evidence," Simpson had said, in publishing his Notes. "has of late been adduced, and is daily accumulating, in proof of the inhalation of sulphuric ether being capable, in the generality of individuals, of producing a more or less perfect degree of insensibility to the pains of the most severe surgical operations." The first public evidence of the anæsthetic property of ether had been given three months previously in the Massachusetts General Hospital, of Boston, U.S.A., by William Thomas Green Morton; and our Transatlantic brethren did well to choose the 16th of October last to celebrate the Jubilee of the Inauguration of the Anæsthetic Era in Medicine. For it was on the 16th of October, 1846, that Dr. Morton put to sleep a man on whom Dr. J. J. Warren, the senior surgeon of the hospital, operated for a vascular tumour under the jaw with complete success. Mr. Morton was a dentist, on whom some years later the Washington University of Medicine in Baltimore worthily conferred the honorary degree of M.D. Mr. Horace Wells, of Hartford, Connecticut, who had had Morton first as a pupil and afterwards as a partner in his profession, had demonstrated two years earlier that insensibility to pain could be produced by the exhibition of nitrous oxide gas, sufficient to admit of painless tooth-pulling; but he failed to satisfy the Boston surgeons of the possibility of its systematic employment either in dentistry or general surgery. Dr. Charles Thomas Jackson, professor of chemistry in Harvard University, had made known to Dr. Morton the virtue of sulphuric ether, when the latter was zealously trying to follow up the experiments of Horace Wells. Unseemly disputes arose among them and others who claimed to have forestalled them. But as the mists of controversy cleared away, it became evident that to Morton belonged the chief merit of the discovery, although he had dimmed his fair fame by taking out a patent and trying to make a trade of it.

It was needful that someone else should arise to convince alike the profession and the public of the value of anæsthetics, and to secure their use in all the exigencies of practice; and Sir William Fergusson was well within the mark when he said—"It was at least fortunate for anæsthesia that Simpson took it up." Ere humanity could reap the benefit of the discovery, a hard battle had to be fought against ignorance, apathy, and prejudice, and James Young Simpson was the protagonist in the scene.

## THE HERO IN THE STRIFE.

The story of his life may be read in full in the excellent *Memoir* written in 1873 by his learned friend, Professor Duns, or in the more recent vivid sketch in the series of *Famous Scots*, from the pen of his talented daughter. The earliest notice of him occurs curiously enough in the first of two volumes, which I show you now, containing a record of all the cases of midwifery that occurred in the practice of Mr. Dawson, surgeon in the village of Bathgate in West Lothian, where Simpson was born in 1811. It reads—"275. June 7. Simpson, David, baker, Bathgate. Wife, Mary Jarvey, æt. 40. Lab. nat., easy, rapid. 8th child. Son. Natus 8 o'clock P.M. Uti veniebam natus. Paid 10/6."

## HIS FOREBEARS.

David Simpson came of a race which in earlier generations furnished moss-troopers for border raids, and in more recent times had earned their bread by the hard toil of farmers, quarrymen, and other like peaceful avocations. David's father was a farmer, shrewd and energetic, and renowned in the countryside for his skill in the management of cattle and their diseases. There was a strong streak of superstition in him that came out in various ways. Thus, when a beggar woman who was wont to be wheeled in a barrow from one part of the parish to another had had her rest and refreshment at Slackend. he bade a servant lass wheel the old wife away. To his dismay the woman broke out, "I'll hae nae bit hizzy like that to hurl Gaur ane o' your five braw lads gang wi' me, or it 'll be the waur for this hoose." He remembered that his daughter had sprained her ankle when the woman had been round that way before, and taking into his head that she was a witch, he whipt a sharp piece of flint out of his pocket and drew a gash across her brow, saying, "Ah, I see what ye're noo, ye auld witch; but I've scored ye aboon the braith, and my hoose

If James Simpson inherited from his paternal forebears the

tireless energy, the patient industry, the readiness for conflict, the resourcefulness in emergencies that were to be in him so signally displayed, his mother transmitted to him qualities that were not less needful for the great career before him. Along both lines happily he inherited a reverence for grace and truth, a certain fearless independence of judgment, and that "firm resolve" which Burns apostrophises as "Thou stalk o' carl-hemp in man." But it was from his mother especially that he drew his exquisite sensitiveness to pain and tender sympathy for sufferers, his rare intuition-like power of rapid perception, his deftness of touch, his silvery voice, and the magnetic attractiveness that worked like a spell on multitudes. For Mary Jervey was of Huguenot descent on her father's side, and among her maternal ancestors she counted kin with some of the gentlest of Scottish blood. In particular the family took delight in tracing back their pedigree to James Cleland of that ilk, who was cousin to Sir William Wallace, and one of his henchmen in the Scottish wars with "proud Edward's power." She was 40 years of age when she gave birth to her seventh son and youngest child, and she continued to suckle him till he was 3 years old; so that when people would be speaking of their earliest memories he sometimes astonished a fitting company by saying he remembered when he was weaned.

#### HIS BOYHOOD.

In Scotland a seventh son is ever an object of peculiar interest, and the winsome boy who occupied this place in the baker's house seemed at once to bring good fortune with him. Things began to amend in business after he appeared, and the sister who played for many years a mother's part to him proudly foretold his future greatness. As a child he must have been of cherubic innocence. The brother immediately above him in the family would tell how James came to him one day with great glee to show him a halfpenny that his quick eve had discovered under a stone in the corner of Gideon "My, I wouldna like to be you," said David, with a very grave face. "Glowd-ma-grannie 'll hae put it there." (Glowd-ma-grannie was the nickname of the village character who was the terror of the small boys and the butt of the bigger lads of that generation in Bathgate.) "If he finds out wha took his bawbee, you'll catch it." The little innocent went and slipped back the coin under the stone, where, of course. David found it by and by. Probably the disappointment was sweetened by one or two of the sugar-balls in which the halfpenny would be invested. That he could acquit himself well in boyish accomplishments may be gathered from the circumstance that when he was careering on stilts once in the gloaming he sent old John Crawford home in a fright, declaring to his household that he had "seen Jamie Simpson's

wraith fleeing yont Jervey Street."

The head that, when it came to full development, was to be described, with its long wavy locks, as "Jove-like," was already noted in the youth to be of extraordinary size. When on a visit to his oldest brother at Grangemouth, the village barber there cropped his hair so close that his brother went to remonstrate with the man, who pled that the "callant had sic a muckle heid, I was daein' my best to mak' it look respectable."

#### STUDENT AND GENERAL PRACTITIONER.

As in many a Scottish homestead where love reigns, some of the older members stinted themselves to secure the education of the bright young brother who was the sunshine of their home. He learnt so much in his native town as to be able to profit by two years' attendance at the arts classes in the University of Edinburgh, and acquired a taste for literature, and especially such a knowledge of Latin as made it a delight for him in after years to hunt through all kinds of antique volumes to find out what had been known in former times on the many matters that came to engage his interest. For whether the subjects he treated of were more general, or more strictly professional, even when he was obtaining some new outlook and moving on to fresh lines of discovery, he was always eager to trace out the way along which the human mind had travelled; and many of his essays thus form a storehouse of reference for the history of their themes.

When he had studied medicine for three years he was able to obtain the diploma of the Royal College of Surgeons at the age of 18, and was thus qualified to apply for a situation as surgeon to the village of Inverkip. He has said that if chosen he would probably have worked on there as a village doctor all his days. That is not at all likely, but we can well believe him when he says—"When not selected, I felt perhaps a deeper amount of chagrin and disappointment than I have

ever experienced since that date."

He spent a season in working sometimes with his friend, Dr. Girdwood, in Falkirk, and more frequently with the family doctor, Mr. Dawson, in Bathgate. The worthy doctor was glad

to have his aid in looking after some of his patients and making up their prescriptions, and occasionally got opportunities for him to make the post-mortem examinations which his spirit of scientific investigation prompted him to seek. In one case the old doctor pointed out to him a fistulous opening which had resulted from a central rupture of the perineum during labour, and on the way home remarked that it would have made a fine preparation. "I thought so," said his young assistant, "and I've got it in my pocket." He had a woodcut made of it years afterwards to illustrate his lectures, and here is the preparation still. In making his visits in the country he took note of the antiquities and natural history of the district, and made a special note of a bed of Senecio sarucenicus growing at Kirkroads, near the site of an old Cistercian monastery—a plant which is said to have only one other habitat in Scotland.

Perhaps his experiences revealed to him that the department of the healing art in which he was most defective was what to a general practitioner is the all-important department of midwifery. He had a keen scientific bent, greatly fostered by association with his fellow-townsman and room-mate in their college days, Dr. John Reid, who afterwards became Professor of Physiology in St. Andrews; and, as the midwifery lectures were not delivered till between three and four in the afternoon. he told me that, when he attended Professor Hamilton in 1829-30, he regularly went off to sleep. Hence, when he returned to Edinburgh to fit himself for taking the University degree of M.D., he attended three of the courses of lectures given by Dr. Thatcher, one of the extra-mural lecturers who was afterwards a rival in his contest for the chair. With this exception, he had given no special attention to the sphere of medicine with which his name was to be for ever associated, and at the time he attended Thatcher's lectures he was acting as first assistant to Dr. John Gairdner, who said of him that "his abilities and attention promise the most flattering expectations."

## HIS FIRST SITUATION.

The subject of the thesis which he had to submit for the obtaining of the doctorate, in 1832, was a pathological one—

De causa mortis in quibusdam inflammationibus proxima

—written, according to the custom of the time, in Latin. This thesis fell into the hands of Dr. John Thomson, who had been appointed to the chair of pathology, founded at his own instance just a year previously. Professor Thomson, father of

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William and Allan Thomson, who filled with such distinction the chairs respectively of practice of physic and anatomy in the University of Glasgow, was so struck with the ability of the young graduate that he offered him the position of assistant at a salary of £50 a year. It was his first offer of a definite position and was gladly embraced. He had not only to assist the professor in the arranging of his museum and writing descriptions of his preparations and drawings, but also in the composition of his lectures. On one occasion he had written, at the request of his "chief," part of a lecture dealing with microscopic observations which were then quite novel. His young enthusiasm led him to write strongly of the importance of these researches, and of the light which the use of the microscope was likely to throw on various pathological problems. It was only ready in time for the professor to take into the class-room without previous perusal. Several times as he read the lecture to the class he looked up from his paper to glower at his assistant: and when they got to the side-room he shook his fist in his face, saying, "I don't believe oneword of it." But though Thomson was sceptical as to the value of the instrument that was to revolutionise his science, he had the shrewdness to recognise the rare gifts of his young assistant, and when he was unable to conduct his course in the session 1837-38, he got Simpson appointed as interim lecturer.

#### BECOMES OBSTETRICIAN.

He it was who first pointed out that in the sphere of midwifery Simpson would find the most fitting field for the exercise of his faculties; and, through the kindness of Dr. Moir, I can show you the note with which he furnished the student graduate when he advised him to get the profit of another course of the lectures of his colleague, Professor Hamilton. It reads:—

"MY DEAR SIR,—I beg leave to introduce to you the bearer of this note, Dr. James Simpson, an old pupil of your own, who has acted as my amanuensis for a long time. He is desirous to attend your lectures this winter, and I shall feel particularly obliged to you if you will have the goodness to give him a ticket for that purpose, and shall be happy in an opportunity at any time of obliging you in a similar manner.—Yours faithfully,

"JOHN THOMSON.

<sup>&</sup>quot;80 GEORGE STREET,
19th November, 1833."

It was thus not till he had been for more than a year a graduate that he set himself earnestly to master midwifery, and busy though he necessarily was with pathology, by the time he had to read a dissertation to the Royal Medical Society in November, 1835, he produced a work on Diseases of the Placentu, which is still a classic. In 1838 he began an independent course of lectures on his chosen theme, and felt so confident of success that as the professors entered on one occasion for the "capping," which he had taken some lady friends to see in the University, he pointed to Prof. Hamilton and said, "Do you see that old gentleman?—well, that's my gown." On the 4th of February, 1840, the sagacious Town Council gave him the right to wear it, and commissioned him to teach midwifery and the diseases of women and children. When my father told Dr. Dawson of the happy event, the old man only said, "It's all very well to have got his chair. But you know he can never have such a practice as Prof. Hamilton. Why, ladies have even been known to come from England to consult him." Happily he lived long enough to see ladies begin to come from the ends of the earth to consult Hamilton's successor.

#### PROFESSOR OF MIDWIFERY.

When Simpson took up the duties of that chair, it soon became manifest that a master mind had begun to deal with midwifery and the diseases of women. If it has been truly said that "he gave a new life to Obstetric art and science," it may be said that as for Gynæcology he presided at its birth. It was born eo obstetrice. His genius showed itself (1) in his power of seeing things; (2) in his power of adapting means to ends; and (3) in his power of making others see what he had seen, and do what he had done. Let me illustrate this, first from the obstetric, and then from the gynæcological department of his work.

Here is the cast of the head of a child which he helped Dr. Burns to deliver by means of Murphy's craniotomy forceps. After breaking up the skull he left the patient, according to the then common practice, to allow the uterus to recover its tone, and to give time for the commencing swelling of the passages to subside. Returning in a few hours, he found to his surprise that the head had already descended through the narrow brim, and the child was easily extracted. Surely such an occurence was not novel. But Simpson saw it. He saw that unintentionally he had fractured the occiput close to the

foramen magnum. He reasoned that if we could in every case fracture the base of the skull, the extraction of the head would be facilitated, and he set himself to contrive the cranioclast. As soon as he had proved its efficacy he published an account of it, and, as modified by Braun of Vienna, it speedily superseded

all previous methods of reduction of the head.

In this jar you see a preparation of a uterus containing a fibrous polypus, the neck of which is in process of separation, resulting in a fatal hæmorrhage. Aided by the sound, which he had not long previously invented, he and his friend Dr. Alexander Wood, who had called him in to see the patient, formed a shrewd guess as to the cause of the patient's floodings; but they were not allowed to use any means to get at the seat of mischief. It would, I presume, be now impossible to obtain such a preparation, for Simpson saw how that life might have been rescued if only they had had the power of opening up the cervix, and he contrived the now familiar sponge-tent for the purpose. Of course, other methods of dilating the canal have also been employed since then, but until Simpson saw that uterus, and showed how simply such patients could be cured, the writers on female diseases spoke of the diagnosis even of intra-uterine polypus as always doubtful, and in most instances impossible. Nothing more easy now both to recognise and to He never kept anything secret that he thought could help his fellows, and it is hard to say whether his delight was greater in finding some new means to cure disease, or in demonstrating to others his methods of treatment.

The note-books of his student days are studded with points of interrogation attached to the dicta of his teachers. After he began to have Nature for his teacher, he questioned her at every turn, and ever and anon she yielded up to him some

secret.

## HIS VERSATILITY.

Surely there never was another to whom so many practitioners came to get new lessons in the healing art. For more than a quarter of a century, hardly a day, and never a week passed without bringing doctors to the house, to whom he had something fresh to show. The country doctor who came with a patient was shown others with kindred ailments, saw how they were being treated, and went back to his solitary sphere with new confidence and success. The foreign professor, who had been doubtful as to some procedures, came and stayed for a week or two, till he was satisfied of their feasibility, and

returned to put them in practice, and teach them to his students. Younger men would come from all quarters, both of the old world and the new, to spend sometimes weeks, and sometimes months together, studying his principles and observing his

practice, and then go to propagate them everywhere.

I do not attempt to speak of the work he did outside his profession, in archæology; in literature; in politics, local and imperial; in university and medical reforms; and in many varieties of philanthropic enterprise. The great brain was never at rest, and found its recreation only in change of interest. Within the range of his profession his interests were not confined to the special department of his chair. Foreigners working in the sphere of surgery sometimes spoke of him as a surgeon. His old master, Professor Thomson, had told the Town Council of his day that he was "fully qualified to conduct the business of the pathology class;" and when Alison died in 1854 there were many who wished he would take the chair of practice of physic. Ere the day of anæsthesia dawned he had begun to vivify midwifery and to bring gynæcology into being as a science. Had he never lulled for woman her travail pangs, his name would still have been written among the immortals in his art. "Gifted," said his colleague, Professor Miller, "with talents that are given to few; armed with a zeal and enthusiasm which are absolutely indefatigable; restless and eager, yet withal careful and scrupulous in his research for truth; full of a pure and largehearted benevolence—he has made many discoveries and improvements in his profession, which are of themselves well capable of transmitting his name safe and honoured to posterity. But all are eclipsed in this his latest and his best. We admire his talents; we praise his zeal; we rejoice in his success; and while we honour his genius, we love the man."

## ONE OF HER MAJESTY'S PHYSICIANS.

Before the news came from America that surgical operations might be carried out painlessly on patients narcotised with ether, his high position in the profession had been acknowledged in the highest quarters. Just at that time one of Her Majesty's physicians for Scotland died, and the Duchess of Sutherland, Mistress of the Robes, requested of the Queen to appoint Dr. Simpson to the vacant office. While he was conducting his first anæsthetic labour, this letter from Her Grace was on its way to Edinburgh:—

"STAFFORD House, "January 18th.

"DEAR SIR,—It was a great pleasure to me to receive yesterday a letter from the Queen, telling me that she should have much pleasure in complying with the request 'which his high character and abilities make him very fit for.' The Queen adds that it will be officially communicated to you.—I remain, Dear Sir, yours very truly,

## "HARRIET SUTHERLAND."

The contents of Her Grace's note he communicated to his brother on the Friday following, the 22nd, in a letter which was never meant to be read beyond the family circle, but from which I quote two characteristic sentences:—"Flattery from the Queen is perhaps not common flattery, but I am far less interested in it than in having delivered a woman this week without any pain while inhaling sulphuric ether. I can think of naught else."

## PREPARED TO WELCOME DISCOVERY OF ANASTHESIA.

This utterance reveals to us a quality which made him welcome with a peculiar eagerness the new discovery, and expend all his energies for its development—that is his delight in the lessening of pain. The great strong brain was matched with a great tender heart. In his student days he was so distressed with the screams and groans of a poor Highland woman on whom Liston was performing excision of the mamma, that he quitted the Infirmary in sadness, and betook himself to the Parliament House. He thought of seeking work in some writer's office. On further reflection he returned to the scenes of suffering, with the problem pressing on his heart and mind how the pains might be relieved. In lecturing to students or addressing graduates he never wearied in insisting that "the proud mission of the physician is distinctly twofold-viz., to alleviate human suffering as well as to preserve human life." Ten years before the anæsthetic virtue of ether vapour was made known, whilst he was first establishing himself in practice, he made experiments with hypnotism, which Abercrombie, Alison, and other leaders of the profession came to his hospital to see. So when the news reached Edinburgh in 1846 that Liston had performed some operations on patients narcotised with ether, Simpson immedi-

ately began to enquire whether in the inhalation of sulphuric ether there might not at length be found the means he had been dreaming of for years of soothing the most agonising pains to which humanity is subject, the pains he had so often to watch with pitying helplessness-the pains of woman in travail.

## FIRST MIDWIFERY CASE SELECTED FOR SCIENTIFIC EXPERIMENT.

The idea of surgical anæsthesia was not new. It was easy to believe that a means had at last been found of producing But to put to sleep a woman in labour is another and a new idea. In realising it problems have to be faced that do not meet the surgeon. Bigelow, of Boston, and Liston, of London, for example, had the fancy that the benefits of anæsthesia in surgery would be principally seen in the practice of swift operators who had remarkable powers of execution, and in whose hands the patient would be for the briefest possible space under the influence of the anæsthetic. was to be used in midwifery at all it would require prolonged administration. That and other problems had to be met, and ere Simpson entered on the field it is very worthy of note that, eager as he was to prove the virtue of the new anodyne, he was careful to select a case that was fitted to afford a solution of the most important of the problems. The case, as we have seen, was one of deformed pelvis, in regard to which he says, "I had predetermined to extract the child by turning, and to try the inhalation of ether vapour upon the mother, with a view to facilitate that operation. During a week or two previously, I had anxiously waited for the supervention of labour in this patient; for, by the result I expected that much would be decided in regard to ether-inhalation in parturition. Would it merely avert and abrogate the sufferings of the mother without interfering with the uterine contractions? or, would it arrest simultaneously both the contractions of the uterus and the sufferings that arise from them? As far as the proposed mode of delivery by turning was concerned, it was a matter of no vital importance whether the etherisation stopped the uterine contractions or not. And on this circumstance depended the eligibility of the case for a first trial of ether-inhalation. The result was most satisfactory and most important; for it at once afforded me evidence of the one great fact upon which the whole practice of anæsthesia in

midwifery is founded—it proved, namely, that though the physical sufferings of the parturient patient could be annulled by the employment of ether-inhalation, yet the muscular contractions of the uterus were not necessarily interfered with; or, in other words, that the labour might go on in its course although the sensations of pain usually attendant upon it were for the time being altogether abrogated."

### CONCLUSIONS FROM SERIES OF OBSERVATIONS.

Having satisfied himself from his careful observation of this case that ether could avert the pains without arresting the contractions of the uterus, he proceeded to make application of it in other patients, and at the next meeting of the Obstetrical Society, on 10th February, he was able to give the history of etherisation in some cases of natural labour, and in one forceps case. The inferences that appeared deducible from these observations he stated in the following terms:—

"1. That the inhalation of ether procured for the patient a more or less perfect immunity from the conscious pain and suffering attendant upon labour;

"2. That it did not, however, diminish the strength or

regularity of the contractions of the uterus;

"3. That, on the other hand, it apparently (more especially when combined with ergot) sometimes increased them in severity and number;

"4. That the contraction of the uterus after delivery seemed

perfect and healthy when it was administered;

"5. That the reflex assistant contractions of the abdominal muscles, &c., were apparently most easily called into action by artificial irritation and pressure on the vagina, &c., when the

patient was in an etherised state;

"6. That its employment might not only save the mother from the mere pain in the last stage of labour, but might probably save her also, in some degree, from the occurrence and consequences of the nervous shock attendant upon delivery, and thereby reduce the danger and fatality of childbed; and

"7. Its exhibition did not seem to be injurious to the child." In the early experiments the patients were not kept anæsthetised for more than half an hour, but in the course of the three or four following weeks, he ascertained that anæsthesia could be safely kept up during labour for one, two, three, and even six hours.

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#### SPREAD OF THE PRACTICE.

Having at once, as we have seen, communicated the success of his first experiment to his professional brethren, his example was followed, first in France by Fournier Deschamps, on 27th January, and then by Baron Dubois, who, on 23rd February, reported to the French Academy of Medicine the results of his experience, with the five following conclusions:—

"1. The inhalation of ether can annul the pain of obstetrical operations.

"2. It can suspend the physiological pains of labour.

- "3. It destroys neither the uterine contractions nor the contractions of the abdominal muscles.
  - "4. It diminishes the natural resistance of the perineum.
- "5. It does not appear to act unfavourably on the health or life of the infant."

In London, Dr. Murphy first, on 13th February, and Dr. Prothero Smith in March, took up the practice. In Germany the first case of anæsthetic midwifery occurred on the 24th of February, under the care of Professor Martin, of Jena. "In America," says Simpson in his report on the early history and progress of anæsthetic midwifery, "the country to which we are indebted for the first knowlege of the anæsthetic effects of sulphuric ether in surgical operations, the same agent was not employed in midwifery till the reports of its use in obstetric practice in Europe had recrossed the Atlantic." It was on the 7th of April that it was first employed in a case of labour by Dr. Keep, of Boston.

## INTEREST OF THE COMMUNITY IN ANÆSTHESIA.

In surgical practice the superinduction of anæsthesia was already meeting with opposition, which became only the more pronounced when it began to be employed in the practice of midwifery. In Edinburgh, in the early days of anæsthesia, many of the citizens found their way to the operating theatre in the Royal Infirmary, "among them," says Professor Miller, "the great, the good, the singularly humane Chalmers, and it was one of the early triumphs of anæsthesia here to see that man of large and tender heart witnessing a bloody and severe operation with composure and serenity, feeling little because the patient felt not at all."

#### OPPOSITION TO ANÆSTHESIA.

But all are not gifted with the open mind and the large heart of a Chalmers. Objections began to be heard on every hand that the novel practice was unnecessary, was dangerous, was impious, and that no good could come of it; and the loudest and most persistent objectors were found strangely enough among members of the profession, which, through all the ages, had been trying to lessen the sufferings of mankind. On the man who first dared to apply it for the relief of the pains of labour, fell the task of enlightening ignorance, of disarming prejudice, of dispelling superstition, and of vindicating for surgeons and accoucheurs the right to give, and for sufferers to claim, the ease that anæsthesia was calculated to afford.

#### RELIGIOUS OBJECTIONS.

To some minds it seemed that the proposal to still the sufferings of a parturient woman was to run counter to a divine command. "It has been ordered," wrote a medical opponent of the practice, "that in sorrow shall she bring forth." Simpson wrote a pamphlet in "Answer to the Religious Objections advanced against the employment of Anæsthetic Agents in Midwifery and Surgery." It is an excellent example of his polemic power, proving from Scripture that the primeval curse as it bore on woman and on the ground was not immutable. He quoted "the sound and excellent Matthew Henry, in his own quaint, pithy, and zealous style," showing "how admirably the satisfaction our Lord Jesus Christ made by his death and sufferings answered the sentence now passed upon our first patient. . . . 'Thus is the plaister as wide as the wound." He indicated from the study of the Hebrew roots that to lessen the attendant pain was not to lessen the labour effort that the words seemed to demand. And then he pointed out how the objections raised against the practice of anæsthesia were applicable to improvements in agricultural processes, and had been applied to many discoveries in science and art—even the healing art, as in the case of vaccination. A clergyman spoke of chloroform as "a decoy of Satan," and his friend, George Gilfillan, furnished him with evidence that when fanners first came into use, a clergyman debarred from the communion those members of his flock who used what was termed "the Devil's wind." He was amused to find soon afterwards one of his students, a son of De Quincey, in his graduation thesis rebuking the unmarried ladies who stood up for what they thought was the divine law, and who insisted on their parturient sisters suffering according to the letter, in this fashion:—" The unhappy and wicked woman who remains unmarried appears to break the command herself in four several ways, according to the following tabular statement:—

"1. She has no conception.

"2. She brings forth no children.

"3. Her desire is not to her husband.

"4. The husband does not rule over her."

It pleased him to find De Quincey himself, in a letter appended to the thesis of his son, arguing that "if pain, when carried to the stage which we call agony or intense struggle among vital functions, brings with it some danger to life, then it will follow that knowingly to reject a means of mitigating or wholly cancelling the danger, now that such means has been discovered and tested, travels on the road towards suicide. It is even worse than an ordinary movement in that direction; because it makes God an accomplice, through the Scriptures, in this suicidal movement, nay, the primal instigator to it, by means of a supposed curse interdicting the use of any means whatever (though revealed by Himself) for annulling that curse."

#### MORAL OBJECTIONS.

Besides the religious objections, there were what he was wont to speak of in his lectures as the moral objections. These in their various expressions were all based on the idea that the practice was unnatural. This idea, pervading the general community, and likely to prevent sufferers from obtaining the benefit of the new discovery, was vigorously championed by the various medical authorities who took it upon them to write down anæsthesia. Professor Meigs thought it "unnecessary, as shown by the birth of past myriads." Dr. Merriman spoke of "the great superiority of allowing nature to conduct the whole process of the birth." Dr. Ashwell decried it as an "unnecessary interference with the providentially arranged process of labour." Dr. Montgomery, the then chief of the great Dublin School of Midwifery, wrote during the session a letter to Edinburgh, in which he said, "I do not believe that anyone in Dublin has as yet used ether in midwifery; the feeling is very strong against its use in ordinary cases, and merely to avert the ordinary amount of pain which the Almighty has seen fit—and most wisely we cannot doubt—to

allot to natural labour, and in this feeling I heartily and entirely concur." I have before me the sheet from his lecture-notes, on which Dr. Montgomery's letter had been copied by Dr. Matthews Duncan, who was then junior assistant to Professor Simpson. Above the words "ether," "midwifery," &c., the professor has marked alternative readings. He would take one of these, suggestive of a doctor making his daily round among his patients, and ask you to imagine Dr. Montgomery writing, "I do not believe that anyone in Dublin has as yet used a carriage in locomotion; the feeling is very strong against its use in ordinary progression, and merely to avert the ordinary amount of fatigue which the Almighty has seen fit—and most wisely we cannot doubt—to allot to natural walking, and in this feeling I heartily and entirely concur."

#### MEDICAL OBJECTIONS.

Then there were various objections of a more distinctly medical kind. It was alleged that the use of anæsthetics would increase the mortality of surgical operations. Simpson wrote papers full of laboriously collected statistics, which proved that while before the introduction of anæsthesia, in every 100 cases of amputation of the thigh performed in our hospitals, from 40 to 50 of the patients died, the same amputation when performed upon anæsthetised patients did not prove fatal to more than 25 in the 100 cases; or, in other words, that out of every 100 such operations the previous induction of anæsthesia was the means of preserving 15 or 20 human lives.

When obstetricians alleged that no good was gained by the relief of suffering, and when Meigs, for example, went so far as to speak of pain as "a desirable, salutary, and conservative manifestation of life-force," Simpson turned to the reports of the Dublin Lying-in Hospital, and showed that out of all the women—7,050 in number—who were delivered within two hours from the commencement of labour only 22 died, or 1 in every 320; whereas in 452 cases where the labour was prolonged above twenty hours, 42 of the mothers died, or 1 in every 11; "a difference," as he said, "enormous in amount and strongly calculated to force us all to think seriously and dispassionately of the effects of severe suffering upon the maternal constitution."

When it was alleged further that the use of anæsthetics might produce mental derangement, convulsions, paralysis, pericarditis, puerperal fever, and other mischiefs, he showed

from the results of a constantly widening practice, the futility of such fears; and in regard to some of these complications of labour, and notably in regard to convulsions, experience eventually showed that so far from causing convulsions, the practitioner had been furnished in the administration of chloroform with his most reliable remedy.

The mention of chloroform reminds me that I have been

anticipating.

#### Is Sulphuric Ether the only Anæsthetic?

The mind that had riddled the student note-books with points of interrogation was bound to enquire whether nature had not concealed among her treasures some other agent that might be possessed of the anæsthetic properties of sulphuric ether, without some of its attendant drawbacks. Ether, he noted, required to be administered in large quantities, especially in protracted cases of labour. It occasionally gave rise to bronchial irritations. Its odour was disagreeable and persistent, and hung for long about an accoucheur who had delivered a woman under its influence. He began to enquire whether other anodyne drugs could not be administered through the lungs, and got the chemists, Duncan, Flockhart & Co., to prepare ethereal tinctures and other vaporisable compounds of various potent sedatives for purposes of experiment. researches he had made into the history of painless surgery quickened the expectation that other gases or volatile liquids might yet prove serviceable. He talked the matter over with various professional friends more conversant with chemistry than himself, with teachers of chemistry, with practical chemists He was led to make experiment on the and druggists. inhalation of various liquids that seemed more fragrant and agreeable than ether, such as acetone, nitrate of oxide of ethyle, benzin, the vapour of iodoform, &c. Prof. Gregory suggested chloride of hydro-carbon (Dutch liquid), which he tried on himself with dangerous consequences. Mr. Waldie, a Linlithgowshire friend who was in business as a chemist in Liverpool, suggested the perchloride of formyle. quantity of it was procured from Duncan, Flockhart & Co., but it seemed a heavy unvolatile-like liquid, and for the time was set aside. He had Dr. George Keith and Dr. Matthews Duncan as his assistants at the time, and he gladly expressed his indebtedness to them "for the great and hearty zeal with which they constantly aided him in conducting the inquiry." They used to put a teaspoonful of the liquid which they were testing in the bottom of a tumbler, cup, or saucer, or fingerglass. If it was not sufficiently volatile the vessel was placed The mouth and nostrils were held over the in hot water. mouth of the vessel and inhalation slowly proceeded with, and notes taken of the effects.

#### DISCOVERY OF ANASTHETIC VALUE OF CHLOROFORM.

Prof. Miller, who lived next door in Queen Street, and looked in nearly every morning at "52" before starting on his rounds at 9 o'clock, has described the circumstances of the eventful evening when chloroform yielded up the secret of its subtle power in a graphic page, which furnishes a trustworthy record of the discovery. It reads:-

"Most of these experiments were performed after the long day's toil was over—at late night or early morn; and when the greater part of mankind were soundly anæsthetised in the arms of common sleep. Late one evening-it was the 4th of November, 1847—on returning home after a weary day's labour, Dr. Simpson, with his two friends and assistants, Drs. Keith and J. M. Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material, which he had formerly set aside on a lumber-table, and which, on account of its great weight, he had hitherto regarded as of no likelihood whatever. happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of waste paper. with each tumbler newly charged, the inhalers resumed their vocation. Immediately an unwonted hilarity seized the party, they became bright-eyed, very happy, and very loquacious expatiating on the delicious aroma of the new fluid. conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was quiet, and then—a On awakening, Dr. Simpson's first perception was mental—'This is far stronger and better than ether,' said he to himself. His second was, to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned round and saw Dr. Duncan beneath a chair—his jaw dropped, his eyes staring, his head bent half under him; quite unconscious, and snoring in a most determined and alarming manner.

noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs, making valorous efforts to overturn the supper-table, or more probably to annihilate everything that was on it; I say, more probably, for frequent repetitions of inhalation have confirmed, in the case of my esteemed friend, a character for maniacal and unrestrainable destructiveness, always under chloroform, in the transition stage. By and by, Dr. Simpson having regained his seat, Dr. Duncan having finished his uncomfortable and unrefreshing slumber, and Dr. Keith having come to an arrangement with the table and its contents, the sederunt was resumed. Each expressed himself delighted with this new agent; and its inhalation was repeated many times that night—one of the ladies gallantly taking her place and turn at the table—until the supply of chloroform was fairly exhausted."

Miss Agnes Petrie, the niece who shared in the experiment, amused them by folding her arms across her bosom before she fell quite asleep, and exclaiming "I'm an angel! oh, I'm an angel!" They sat up till 3 A.M., after the vial was empty, searching works on chemistry for its composition and best methods of preparation. Next day, Mr. Hunter, of Duncan, Flockhart & Co., began that distillation from a retort, which has grown in the hands of the firm to be one of the great industries of Edinburgh. When a few days later Professor Miller offered Simpson an opportunity of administering chloroform to an infirmary patient on whom he was to operate for strangulated hernia, Simpson was unable to attend, and it happened, as has sometimes been seen in other surgical cases, that when the skin had been cut through, the patient fainted and died before the operation had been well begun. On the 10th of November Simpson formally communicated his discovery to the Medico-Chirurgical Society at its first meeting for that session, and when his communication was published, in pamphlet form, with a postscript on 15th November, he was able to announce that he had exhibited the chloroform to about fifty individuals "without the slightest bad result of any kind."

## THE FIRST CHLOROFORM LABOUR.

As was to be expected, one of the first to experience the relief from suffering afforded by the new anæsthetic was a parturient patient; and he gave at that meeting of the Medico-Chirurgical Society the following history of the case:—

"The lady to whom it was first exhibited during parturition had been previously delivered in the country by perforation of

the head of the infant, after a labour of three days' duration, In this, her second confinement, pains supervened a fortnight before the full time. Three hours and a half after they commenced, and ere the first stage of the labour was completed, I placed her under the influence of the chloroform, by moistening, with half a teaspoonful of the liquid, a pocket handkerchief, rolled up into a funnel shape, and with the broad or open end of the funnel placed over her mouth and nostrils. In consequence of the evaporation of the fluid, it was once more renewed in about ten or twelve minutes. The child was expelled in about twenty-five minutes after the inhalation was begun. The mother subsequently remained longer soporose than commonly happens after ether. The squalling of the child, did not, as usual, rouse her; and some minutes elapsed after the placenta was expelled, and after the child was removed by the nurse into another room, before the patient awoke. She then turned round and observed to me that she had 'enjoyed a very comfortable sleep, and indeed required it, as she was so tired, but would now be more able for the work before her.' I evaded entering into conversation with her, believing that the most complete possible quietude forms one of the principal secrets for the successful employment of either ether or chloroform. In a little time she again remarked that she was afraid her 'sleep had stopped the pains.' Shortly afterwards, her infant was brought in by the nurse from the adjoining room, and it was a matter of no small difficulty to convince the astonished mother that the labour was entirely over, and that the child presented to her was really her 'own living baby.'"

Seventeen years afterwards his friend, Dr. Adamson, of St. Andrews, sent Simpson this charming photograph that had just been taken by Rogers of a young lady. The accompanying letter told that it was a photograph of the baby of his first chloroform patient, and as you mark the mild angelic air that rests upon the upturned face above the folded hands, you will understand why Dr. Adamson suggested that it might stand for a picture of Anæsthesia, and that it was a pity the girl had

not been called by that name.

Simpson believed that he had discovered in chloroform an anæsthetic that possessed various important advantages over ether, "particularly in obstetric practice; and that, in particular, it is far more portable, more manageable and powerful,

<sup>1 &</sup>quot;In consequence of extreme anxiety at the unfortunate result of her previous confinement she had slept little or none for one or two nights preceding the commencement of her present accouchement."

more agreeable to inhale, is less exciting than ether, and gives us far greater control and command over the superinduction of the anæsthetic state." His interest in the new anodyne gave additional zest to the eagerness and energy with which he had set himself to demonstrate the right, and even the duty, of surgeons and accoucheurs to make use of anæsthetic agents; and he did not cease his efforts until he had seen the importance of anæsthesia fairly recognised, and such an impetus given to surgical progress as it had never before received, and such as has only been rivalled since when Lister—praised be the Queen who has raised him to the peerage—inaugurated the Antiseptic Era.

#### DANGERS OF ANASTHESIA.

Of the anæsthetics that have been proposed for use in practice, three alone at the resent hour promise to hold an abiding place—nitrous oxide gas, first used by Horace Wells in 1844; sulphuric ether, introduced by William Thomas Green Morton in 1846; and chloroform, the anæsthetic power of which was proved and promulgated by James Young Simpson in 1847. The fatalities that have attended the administration of each of them have led to a continuous search for some agent that might possess their power without their danger. Simpson to the end hoped that such a discovery might be made. last time he had a pen in his hand he wrote of anæsthetic agents, and said—" In all likelihood some will yet be discovered of types superior to any we yet know." When Dr. Snow, who did so much to perfect and promote the practice of anæsthesia. proposed the use of amylene, his proposal was eagerly welcomed. I remember well the enthusiasm with which Professor Tourdes, of Strasburg, invited me to hear a lecture on the new agent in the spring of 1857. When he had sufficiently discoursed on the drawbacks and dangers of ether and chloroform. he proceeded to demonstrate the ease and safety with which a rabbit could be brought under the influence of amylene, and, whilst he still praised the new agent, when he lifted the bag off its face—the creature was dead. In 1883, I was present at the Obstetrical Section of the Naturforsscherversammlung in Freiburg, when Professor Bandl proposed the use of bichloride of methylene as a substitute for chloroform in labour. fessor Hegar, the president, winding up the discussion, said-"Yes, gentlemen, we try anything, everything, but in the end we always come back to chloroform."

It is still a subject of discussion whether ether or chloroform

is to be preferred as an anæsthetic. Individual minds and groups of minds have inclined to favour now the one, and now the other. In Professor Ernst Fraenkel's Tagesfrugen der Operativen Gunäkologie, which came to hand a few weeks ago, we read, "Convinced adherents of chloroform have grown to be enthusiastic advocates of ether, and then gradually and very quietly turned back into the camp of the chloroformists." What we must all recognise and remember is that no anæsthetic has yet been found regarding which we can affirm that it is free from danger; and in each individual case we must choose the agent that seems best adapted to it. In general we see that Wells' nitrous oxide finds its chief sphere of application in the dentist's office; that surgeons who have command of time, assistants, and apparatus may make use of Morton's sulphuric ether; while the surgeon on the battlefield, the general practitioner in his busy round, and the obstetrician in the lying-in room find themselves best served by Simpson's chloroform.

#### SIMPSON'S GREATEST DISCOVERY.

Any sketch of the man, whose services to anæsthesia we have considered, would be incomplete that took no notice of what was to him the most important incident in his life. One who asked of him in his last days, "What do you consider your greatest discovery?" got for reply—"That I am a sinner, and that Jesus Christ is my Saviour." That discovery came to him on Christmas Day, 1861. One of those great spiritual movements that powerfully influence a community was at that time spreading widely through the land, which had this among other characteristics, that it called out in a remarkable manner all classes of laymen, from nobles to navvies, to take part with the ordained ministers in what were then for the first time described as evangelistic meetings.

We have seen that Simpson's house was a rendezvous for all sorts and conditions of men. The strangest streams of life were constantly flowing through it. Candidates for seats in Parliament or in the Council Chamber of the city, for vacant chairs in the University, for posts in the Infirmary, for lectureships in many schools of medicine, and for pulpits in town or country—all came to seek his advice and bespeak his influence. Antiquaries came with their latest finds; artists and architects sought his opinion of their designs; poets brought him their new poems, and novelists their stories; the Arctic voyager, the African explorer, the traveller from Mecca, missionaries from all parts of heathendom, came with

news and gifts of every kind. It could not be but that among the throng there should be some who told him that they had found what his friend, Dr. Hanna, called "the open secret." Salome's son, John, may have been ambitious and of a fiery temper, but he was not a bad man before the day when he heard the Baptist say, "Behold the Lamb of God," and he went and followed Jesus. Mary Jervey's son was not a bad man before that Christmas Day when in prayer with Mrs. Barbour he saw that the babe of Bethlehem had been born to give him second birth. But it was a new man who from that time began to fence his house with family worship; and when I look into the Bible which he bought to read the Scripture from, I find that where the prophet speaks of One "wounded for our transgressions," he has pencilled above the "our" the possessive singular "my." It was consonant with the great-hearted expansiveness of the man, that he began both in private and in public to share his joy with all who cared to taste of it. His conduct has been variously judged. The simple explanation is that the love of Christ constrained him, and when I last heard him address a meeting in the Free Barony of this city in the winter of 1867-68, there was the same note of personal experience and of wonder at "the infinitude of God's love to our fallen race" which marked his first appeals.

The change in his acknowledged relation to God in no way lessened the service he still delighted to render to his fellows, but it variously affected various minds. An Edinburgh gossip asked Miss Catherine Sinclair if she had heard of his conversion, and that excellent lady replied, "If Professor Simpson has been converted, it is time some of the rest of us were seeing if we do not need to be converted."— When he presided at an evangelistic meeting addressed by Dr. Hanna, a woman said the sight of the chairman's happy face had done her as much good as a sermon.—He went to a meeting of the Royal Society in the company of his life-long friend, Dr. Skae, of Morningside Asylum, and some of the Fellows thought it a good joke to infer that Simpson had gone mad, and to send round the rumour that Skae was looking after him.—"And have you read it?" asked Dr. Andrew Wood of Father Rigg, afterwards Bishop of Dunkeld, when he told him that Professor Simpson had given him a copy of his address, entitled Dead in Trespusses and Sins. "Yes," said that good Catholic, "I have read every word of it." "Well, what do you think of it?" "It's the production, sir, of a genius."

When Sir David Brewster died in 1868, Sir James Simpson, who had been asked to move the resolution of regret in the Royal Society of Edinburgh, told how he had seen that "archpriest of science passing fearlessly through the valley of death, sustained and gladdened with the all-simple, and all-sufficient faith of a very child." His words described to the letter his own departure in 1870; and if, with Sir David's gifted daughter, we try in imagination to follow these great spirits through tracts unknown, and to see on what high quests they fare forth there, we can only say with her of one as of the other—

"We see not, we see not; but this we know, He has bowed his head with its honours low. 'Not mine! not mine!' is his whisper meet, As he casts his crown at his Saviour's feet."

NOTES ON THE OCCURRENCE OF A NUMBER OF CASES OF EPIDEMIC ROSEOLA OR RÖTHELN IN THE CITY OF GLASGOW FEVER HOSPITAL, KENNEDY STREET.

By JOHN BROWNLEE, M.A., M.B., C.M., Assistant Medical Officer in Charge of the Hospital; and

CAMPBELL S. MARSHALL, M.B., C.M., Resident Assistant Physician, Belvidere Fever Hospital.

WE are led to make this communication as it relates to a matter which must have a considerable amount of local interest.

The presence of an epidemic roseola is a point on which difference of opinion must always exist, and which must be very difficult to prove; but we think that a consideration of our notes will lead to more than a strong suspicion that such an epidemic is at present in our midst.

One of the drawbacks of a fever hospital is the liability to infection to which patients are always exposed through the possibility of the introduction into a ward of some one who is incubating a different infectious disease to that which is there isolated. Lately the epidemic of measles has led to a comparatively large number of such cases being sent in, so many, in fact, that a ward has been set apart for their isolation during the last five months. Cross infection did not occur until about

the middle of December, but from that time till the end of the third week in January it was very frequent. At first it was not recognised that a third exanthematous fever was present. This arose from the fact that the first case resembled scarlatina, and occurred in a patient in whom the presence of that disease on admission might be considered doubtful, while the next three were very like mild cases of measles.

On 11th January the determination was come to that epidemic roseola was the disturbing factor, and a ward was set aside for the isolation of such cases. It was owing to an accident which happened in the administration of this ward that the completeness of the proof given in this paper depends, and how it happened will be found described in the notes on the accompanying table where the history of the infections is detailed.

We got the infection in two ways:—(1) By wrong diagnosis, rötheln existing in place of scarlatina; (2) by the scarlatina

patients incubating the former disease on admission.

The number of the former cases seems to have been small, though the ward journals have been carefully searched throughout the period of the last three months of the year, and in only one case did secondary infection follow, which would seem to show that the contagion is less active after the eruption is out. There were, however, two patients about whom, looking back, there can be little doubt were subjects of rötheln. One of these had a rash which gave rise to grave suspicion of measles on admission, so that the child was isolated. Next day the rash had become scarlatiniform, and as the other symptoms, viz., congestion of fauces and tonsils, furred tongue, with the papillæ slightly prominent, and enlargement of cervical glands, rather confirmed the diagnosis of the doctor who had certified it, it was transferred to a scarlet fever ward, where it developed a typical attack of scarlatina.

To go into the details of each case of rötheln as it occurred would take too long, but a summary of the main points is necessary. The disease has been mild throughout, the highest temperature being 100.4°; in several patients it did not rise above normal. Catarrh of the eyes and nose has to a slight extent been present in the majority, but in some absent. Slight faucial congestion and dryness has also been generally present; the tongue has been often furred, and occasionally the papillæ have been prominent. The enlargement of the cervical glands, which seems to be the most characteristic feature of the disease as described by other writers, is a

phenomenon which was necessarily masked by our patients having all had scarlatina, but in the few cases where adenitis was not already present it was observed that it occurred. The rash was the main point in the diagnosis. In general it was punctate in origin, the points being of a size which was mean between those of measles and scarlet fever. They were sometimes surrounded by an areola and sometimes not. points were rarely seen separately, but generally coalesced into minute patches of less area than those of measles and not nearly so much raised. They were besides of more regular When this was general over the body it exemplified the morbilliform type of rash. But the coalescence might be general, and also accompanied by an erythema as in scarlatina. and then it was almost an impossibility to distinguish it from Both of these types might be present a scarlet fever rash. at the same time on different parts of the same person, and a measly face might accompany a scarlet body.

The colour was not like that of either the measles or scarlet rash, but more of a rose-pink. The development of the rash was as follows:—Generally it was first seen on the cheeks and almost immediately after on the arms and legs, thence extending over the whole body, though in some cases the trunk remained free. The whole duration was rarely more than two days. On one occasion, when it was carefully observed, it was com-

pletely out in less than eight hours.

All through, however, our observation was hampered by the fact that all our patients had scarlatina first, and few had that freedom from sequelæ, such as staining of the skin, enlarged glands, or abnormal tongue, which would allow of the perfect study of the disease.

From what has been said it will be seen that the diagnosis must at times be very difficult, if not impossible. The fact that this hospital receives cases of scarlatina alone has given us an exceptional help, and the necessity of separate isolation and subsequent possible mixing with measles cases afforded a

final test of the correctness of our diagnosis.

It is interesting to compare our results with those of Dr. Alex. Brownlee, recorded in the Glasgow Medical Journal for last August. He has made an observation regarding the variability of the infecting power of the contagion. In two of our wards only one case occurred, and in one ward, where five patients were infected, a child lying among these escaped. The facts that the night nurse who took rötheln was attending to the patients while the rash was appearing (there were no prodromal symptoms, and it was first seen in the morning).

TABLE OF THE WARD INFECTION, 26rn DECEMBER, 1896-21sr JANUARY, 1897.

Ward A denotes the Ward where patients who had measles were isolated, and Ward B the like for rotheln.

REMARKS.	Rötheln incubating o aion (see Nots). Maximum exposure, "	", 14 ", 14 ", 14 ", 14 ", 16 ", 16 ", 16 ", 17 ", 18	Maximum exposure, 9 days.	Incubating on admission.	(See Note.) Maximum exposure, 14 days. Exanthema present indofinite.	Maximum exposure, at least 16 days.
Where sent.	Ward A.	:: :				:
Date of patient developing Morbilli.	Jan. 28.				Jan. 26.	Feb. 7.
Where	Ward A. Jan.			:	Ward A.	Ward B.
Date of patient de- veloping Rötheln.	26. 7. 9.	idd 9	11. 88	" 11.	Dec. 15 7	Jan. 15.
Disease on Admission.	Scarlatina (†) Dec. Scarlatina. Jan. ''	:: :	Rotheln? Scarlatina.	:		2
Previous Infectious Disease.	Measles, Mhooping-cough. None. Varicella pertussis, Morbilli (2 months ago). None.	None. Measles, Scarlatina.	Enterio fever, Pertussis. Mesales (3 months ago). Mesales (1 year ago).	None.	None. Measles	None.
Date of Admission	<b>数 たた 4点</b>	Nov. 12. Dec. 81.	Jan. 2. Dec. 3. Jan. 4.	ø	Dec. 11. Nov. 4. Dec. 16.	. 02
District of Glasgow from which sent.	Anderston.	Bridgegate.	South Side.	High Street.	Anderston.	
Sex. Age.	8 81 20 40	142 4	<b>₹</b> 4 ∞	*	17	*
	F 4F 4	iziei zi	E E E	ß.	E; E; E;	ri .
Name.	ರ ಸೇ. ಕ. ಇಪ್ಪ ಕ.ಸ	J. W.	K. A. A. B. Wm. 8.	₩. ₩.	≓ුනු බුනුනු	5 5
Ward into which patient was admitted.	XIII.	A.	VII.	XIV.	ij	

In all, 7 children have had the three diseases, and 3 more have had scarlatina and rotheln, with a history of measles within the year.

and that no subsequent case occurred in the ward, would seem to show that it was much less infectious than measles. We have also noted the variability of the incubation period, though it has generally been shorter with us than with him.

The chief value of our series of cases lies not so much in the clinical record—that is where his is strongest—as in the strength of the proof they offer, from the point of view of infection, that there is an exanthematous fever different to both morbilli and scarlatina.

# Notes on the Preceding Table. By John Brownlee, M.B.

At the end of last year I was ill, and did not return on duty till 4th January, so that I had not the fortune to see the first cases myself; but after returning, the main part of the epidemic took place. All the ward journals were carefully searched, and all the possible sources of infection considered, with the results detailed below.

WARD XIII.—C. L. This patient had doubtful scarlatina on admission, but there were sufficient appearances to render her removal to the isolation ward possibly dangerous to the patients there. On the 26th December she developed, with a normal temperature, a scarlatiniform rash all over the body, with slight congestion of the throat and enlargement of the cervical glands. She did not desquamate after either attack, whence it is probable that this was the first case of rötheln.

Ward B.—The infection of this ward with measles took place on the evening of 15th January, when a girl of 5 years old suffering from measles spent a night there. This girl developed her symptoms in a ward in which measles had occurred, but she had no prodromal symptoms, and the beginning of the eruption simulated that of rötheln so closely as to be quite indistinguishable. Had she been longer in the hospital the diagnosis would have been simplified; but though long enough to have taken measles, she was not so long as to exclude rötheln. After consideration, the diagnosis was made from the clinical aspect of the case alone, and she was removed to Ward B. Next day the diagnosis was obvious, and she was transferred to Ward A.

WARD VII.—Rötheln on admission. This child has neither desquamated nor had any scarlatinal sequela.

WARD VI.—No definite source of this could be traced, but on 5th January a nurse, who could have had access to this ward, showed me a rash which I found to be associated with gastric symptoms, and at the time regarded as caused thereby. Possibly, however, this child was incubating the disease on admission.

WARD II.—This is the most uncertain as regards both the illness and the source of infection.

K. S. and S. S. developed on 30th and 29th December respectively either measles or rötheln. The source of infection would seem to be the same, but K. S. had been only fifteen days in the hospital, and possibly might have a long incubation period of true measles, for there was certainly no source of measles infection in the ward. On the other hand, she had measles one year ago. The diagnosis was further complicated by the fact she was suffering from enlarged glands after scarlatina, and had a temperature of 102° to 103° at the time. S. S., on the other hand, seems to have clinically conformed to the rötheln type. To offer J. G. as the source of infection is merely a suggestion. On the night of the 15th she had a recrudescence of the scarlet rash, but as that is a not unusual phenomenon it attracted little attention at the time.

R. C. had an undoubted attack of rötheln.

#### CLINICAL ESSAYS ON INSANITY.

By JOHN T. MACLACHLAN, M.D., Dumbarton, Late Senior Assistant, Hartwood Asylum, Lanarkshire.

II.

## INSANITY OF THE DIFFERENT PERIODS OF LIFE—EVOLUTIONAL AND INVOLUTIONAL TYPES.

THERE are three periods of life when insanity is apt to break out, viz., adolescence, climacteric, and old age. The first two are associated with the rise and fall of the organs of reproduction; the last with the decay of the body and mind.

During the period of adolescence there is a great strain on the system from the sexual organs developing rapidly. Along with this development there is a marked normal mental change. The young man (or woman) is losing his unity and becoming more and more an integral part of society. He is becoming more and more altruistic in his ways, and his chief concerns, instead of being immediately centered in himself, now are for others—"He that seeketh his life shall lose it." Religious and amatory sentiments are prominent tokens of this state of adolescence, and adolescent insanity is essentially one of unbridled passions.

Young lads are more subject to the disorder than girls, menstruation perhaps being a sort of safety valve in females. The type of case that becomes insane at adolescence is essentially one coming off a neurotic stock, with a highly

impressionable nervous system.

Sexual troubles are greatly mixed up in this disease, and there are few, if any, adolescent lunatics who do not indulge in the habit of masturbation to an inordinate degree. mothers of such patients generally say he was such a quiet lad and did not keep company and went to the meetings-prayer Clearly, all through the disease, and the stage leading to the disease, there has been a morbid subjectivity of mind. There has been "I thought this and I thought that," when it was no part of the business of the young man's life to think anything of the kind, but to live on and for the external world around him, paying no heed to his bodily functions, or giving way to melancholic morbid introspections. adolescent patients are quiet and gloomy, and lead abstracted They are, so to speak, all egotistically insane, and the treatment consists in recalling them from the world of dreams to the practical one of hard muscular labour—something manual as opposed to something mental. Their bodily health is generally greatly defective. They are frequently thin and pale, and having the appearance of being overgrown.

The outbreak of adolescent insanity generally takes the maniacal form, but it is a fugitive mania if they are properly treated, and one very apt to become chronic and to lapse into

dementia if great care be not used.

During the maniacal stage the patients become greatly exalted and uproarious in speech, and inclined to be very aggressive, and even homicidal. The family ties of affection become greatly impaired, and the patients not infrequently evince a strange antipathy to their best friends. Hallucinations of hearing are almost always present. They hear voices goading them to do this and to do that, and as a consequence they are subject to sudden impulses, and may be really very dangerous to others. Sudden impulsive movements are a very striking feature of adolescent mania. Mentally they are greatly exalted and excited, have numerous grandiose delusions,

which probably had their birth in the antecedent visions of power and ambition that floated through the young man's mind before he actually became insane. But the tendency all through the disease is towards erratic manifestations of perverted mind action—a sheer instability of mind and matter. If the disease assumes a melancholic form, there may be the most uncontrollable impulses towards suicide, and there are few, if any, forms of insanity where these destructive desires reach such a culminating point. In those suicidally inclined patients the eyes may be wild looking, and when the face is pale and the pupils dilated the facial expression is one of terror. Obstinate refusal of food is not uncommon in the melancholic forms, and the patient may require great firmness in dealing with him. Hallucinations of sight are not so common as those of hearing, but they may exist in the acute stage of the disease. Increase of body weight is an excellent indication of

improvement.

Treatment should consist in mental distraction during the acute and subacute stages, with muscular out-door labour and plenty of good nourishing foods. Clouston lays special stress in giving them abundance of nourishment, chiefly in the form of milk and eggs. The bowels require careful looking after, and tonic treatment is greatly needed. Iron tonics, &c., codliver oil and malt extract, are very useful if the stomach will bear them. Masturbation habits require looking after. Great cleanliness of the body is a great help here with good bowel action in the morning, aided if necessary with a teaspoonful of Epsom salts in one-third tumblerful of water before breakfast. The bromides, also, are very useful to allay sexual desires, and if hypochondriacal symptoms exist, the passage of a large-sized bougie occasionally will do good. When the acute symptoms pass away, the social instincts of the patient require fostering, as this will be the best prophylactic in future. The disease, in my opinion, is one induced by self-living and self-exhaustion by bad habits and otherwise. If catarrh of the stomach be present, and the patient refuse food, lavage of the stomach will be necessary along with liquid foods, until the digestive power is restored.

Climacteric insanity occurs in women about the period of the menopause, and in men about the middle period of life—40 to 50 years. It is most typically represented in women, and is associated with the deline of the organs of reproduction—with the cessation of the lochia. About this time, women in health frequently suffer from a multitude of vague symptoms—flushings in the head, singing noises in the ears, headaches,

various neuralgic and dyspeptic symptoms, with very often a loss of mental stability, as revealed by a slight loss of self-control. These are warnings that the vital dynamics of life are undergoing changes, and it is no wonder if the mind should suffer from irregular distribution of nervous energy. It is a period when the mind is apt to recoil upon itself and contemplate its unsatisfied longings, unfulfilled ambitions, and disappointed hopes. There is a rise of the "Ego" at this period. Should insanity break out, it is one characterised by persistent and deep-rooted delusions, and the prognosis is not at all favourable. It is the period when monomaniacal forms of insanity become rampant, and this is in accordance with what is stated above.

Subacute maniacal attacks are very common now, exhibiting a marked periodicity, and this would lead one to suppose that they are a good deal connected with the cessation of the catamenia.

Delusions of grandeur and noble lineage occur frequently, and, generally speaking, the delusions partake of an exalted character. Hallucinations of hearing and smell are not uncommon in climacteric insanity. It is a form of mental disorder in which organic lesions in the brain can scarcely be found to account for the symptoms.

The treatment should have regard to the circumstances under which the insanity broke out. We cannot appeal to defective bodily health in this disorder, as we can in so many other forms of mental disease, as the patients are generally strong and robust-looking. We must seek to guide the perverted nervous energy into healthy channels. Light employments calling the muscles into play are the most suitable, such as housework. Maniacal outbreaks may be subdued by the timely administration of a smart purgative and frequent doses of the bromides. Nervine tonics are useful, such as arsenic and strychnine, but iron combinations, as a rule, should not be given. The excretory organs should be well looked after, and the general rules of healthy living observed. The majority of the patients will require asylum treatment, as many of them are not only homicidal but even suicidal.

In men the disorder is apt to assume a hypochondriacal form, with various delusions regarding the organs of the body, the patients frequently refusing food and requiring to be fed by the stomach-tube. These patients generally seem run down, and perhaps treatment based on the lines of the Weir-Mitchell treatment would do good.

Senile insanity occurs in its typical form in persons over 60 years, and is associated with the decline of the vital powers with organic changes (premature or otherwise) in the heart and arteries. In the vast majority of cases the vessels will be found altered, being atheromatous and thickened, and their walls not infrequently containing calcareous deposits. The disease is associated with softening and atrophy of the cerebral cortex, probably dependent on the altered blood-vessels and heart. The left ventricle of the heart is frequently found

hypertrophied, and the valves thickened and puckered.

Connected with these pathological changes we have various symptoms—loss of memory, particularly for recent events; childishness of disposition, and a feeble circulation with cold hands and feet; inertia of body and mind. Gradually the patient becomes more and more demented, and death may be precipitated by hæmorrhage into the ventricles and pons of the brain, or the patients may gradually sink from exhaustion and hypostatic congestion of the lungs. Slight traces of albumen are not infrequent in the urine. If the patients get exhausted they are apt to get drowsy and partially comatose, apparently from the defective circulation through the brain and the faulty elimination of waste products. Senile insanity should not be confounded with dementia of old chronic lunatics. Nearly every case suffers from melancholic symptoms, having no heart for anything and lacking spontaneity of action. They are gloomy and sad and tired of life, and desire to be away from the company of their fellowmen. They have dejected countenances, often with a pathetic look in their eye. Very often one finds that their skin is dry and hot, and they seem to be burning away with a slow fever; yet, beads of sweat stand out on their forehead under the influence of slight excitement, such as the exertion of taking food. confirmed dementia sets in they may be very restless and noisy, continually mumbling away to themselves, and lazy and dirty in their habits. Their sleep, as a rule, is broken and non-refreshing. Delusions of identity may be present, and the mind be filled with grievous apprehensions of bodily harm about to be inflicted upon them. Distinct improvement may occur from time to time under good nursing and care. Thus some patients are admitted into an asylum wandering and confused in their mind, and really not knowing well what they are doing. A few months afterwards their minds may be quite lucid, although enfeebled. Sometimes the patients are very restless and fidgetty, and cannot content themselves on their chairs, and they are not very amenable to discipline. as they forget the good precepts that the nurse or attendant

may inculcate.

Treatment should consist in keeping the patients clean and making them comfortable, with rest in bed in cold weather if the circulation be weak. Quinine seems about the most useful drug to use. The bowels should be relieved twice or thrice a week with an enema or the administration of a dose of castor oil. Digitalis and spirits of sweet nitre are occasionally useful, if the patients become slightly comatose. Prognosis is often good for temporary improvement, but gloomy as far as recovery is concerned.

P.S.—In some cases of senile insanity where the arteries are very bad, there may be incessant noises heard in the ear, and the patient may construe these noises into the voices of men, and various delusions be manufactured relating to Fenians. dynamite, electric batteries, &c. Indeed, it seems probable that many hallucinations arise from misinterpretations of abnormal sensations arising through defects of the sense-organs.

#### CASE OF SPASTIC HEMIPLEGIA OF GRADUAL ONSET, FOLLOWING A SEVERE ATTACK OF ENTERIC FEVER, AND TERMINATING IN INSANITY.1

By JOHN LINDSAY STEVEN, M.D., Physician to the Glasgow Royal Infirmary.

As probably constituting a rather unusual sequela of enteric fever, I think the case which I now bring before you is of some interest. Goodall and Washbourn<sup>2</sup> tell us that various mental affections may follow enteric fever, and Hilton Fagge 8 states that Nothnagel and others have recorded paraplegia as an occasional sequela, although it is uncertain whether the lesion was in the cord or the peripheral nerves.

In view, then, of the peculiarly spastic character of the hemiplegia in this patient, and of its definite association with a severe attack of enteric fever, as well as of its ultimate termination in insanity, I think the case worthy of record.

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Patient shown at a meeting of Glasgow Medico-Chirurgical Society on 8th May, 1896.

<sup>&</sup>lt;sup>2</sup> Manual of Infectious Diseases, p. 309, H. K. Lewis, London, 1896. <sup>3</sup> Practice of Medicine, vol. i, p. 149, J. &. A. Churchill, London, 1891.

J. J., set. 22, miner and soldier, admitted 11th April, 1896, to Ward 7, complaining of stiffness of left hand and pain over

top of left foot since July, 1895.1

Patient enjoyed very good health all his life until last May, when he had, while out in India, an attack of enteric fever which confined him to bed for two months. About three weeks after recovering from this he began to experience difficulty in approximating the fingers of the left hand to one another. This difficulty increased, and was gradually augmented by a feeling of stiffness and difficulty in extending the fingers of this hand. Soon he found the fingers getting more or less immovably fixed in a position of flexion upon the hand, although the phalangeal joints remained in an extended



Fig. 1.
Showing usual state of hand. (Pholo. by Archd. Young, B.Sc., M.B.)

state. Coincidently with this trouble he began to experience pain over the top of the left foot when walking, and this he feels still in the same circumstances. During the last week of the fever his right leg was very much swollen, but it got well again during his voyage home from India at the end of the year.

He joined the army in 1892. Previously he was a miner. Since coming home he has been discharged from the army on

account of the condition of the hand.

He has never had venereal disease, he says. He smokes about 3 ozs. of tobacco per week. He takes his food well, and his bowels are, on the whole, regular. He has never had any breathlessness or cardiac palpitation. He complains of no

<sup>1</sup> Clinical report by Mr. Archd. Young, B.Sc., M.B., C.M.



Fig. 2.

Showing condition of arm and leg. (Photo. by Archd. Young, B.Sc., M.B.)

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tremor or tingling of arms or legs. He states that although he never had ague while in India, he has had several attacks since coming home.

He has two brothers and two sisters alive and well. One brother was suffocated at the age of 14. His mother is dead;

cause unknown. His father is still alive.

Patient's only complaint of any consequence is as to the left hand and wrist. The condition of these is as follows:—

The fingers are flexed upon the palm of the hand more or They can passively and slightly, by voluntary effort, be extended within narrow limits. The thumb is turned outwards, and flexed at the inter-phalangeal joint (see Fig. 1). Forcible extension of the fingers is accompanied by considerable pain, but the thumb is less painful in this respect. The wrist-joint is fixed, evidently largely by muscular spasm, and not by definite ankylosis. Movement of flexing the fore-arm on the arm is perfectly easily accomplished, but it is accompanied by considerable fine tremor of the whole arm. On attempting to raise the left arm above the head it becomes evident that there is little movement at the shoulder-joint. Most of the movement is accomplished by moving the arm and shoulder en masse, and, as a result, the range is much more limited than on the other side. There is no definite wasting of any of the arm muscles. The position of the thumb in relation to the other fingers is further noted. It is turned round in such a way that it rests upon the radial aspect of the first phalanx of the forefinger. As regards the foot, there is noted a spastic condition evidently involving the extensors, so that the toes are all drawn well up upon the dorsum of the foot, the first phalanx in each case being drawn far back upon the metatarsal bone. The extensor tendons stand out like cords. Despite this, movement of the ankle-joint is fairly free, although rather jerky. The power of the muscles of the thigh, as tested by making and resisting movements of flexion and extension at the knee, is fairly good in both lower extremities, and no appreciable difference is made out between the two sides.

Sensation is tested in both upper and lower extremities, and found to be normal. The reflexes (tendon) in the left upper extremity are abolished; in the right, normal. The superficial abdominal and cremasteric reflexes on the right side are easily elicited; the former can be faintly brought out on the left side, but the latter on the left side cannot be elicited. The knee reflex is distinctly exaggerated on the left side, and ankle clonus is very marked, while on the right side the knee reflex is normal, and there is no ankle clonus.

There is no facial paralysis, but there is a fine tremor of

the eyelids of each side when they are closed.

The radial pulses are alike in strength of beat, and the limbs are alike in temperature, as far as can be made out by the hand.

The heart and lungs are investigated and seem quite normal. There is over the body a sudaminous rash. He sweats a good deal, but has not noticed that one side of the body is more affected than the other.

The right calf, 5 inches below patella, measures 14 inches;

the left, 123 inches.

Urine.—Specific gravity, 1022; acid, high coloured. Slight haze in heat test for albumen. No sugar.

At my request, Dr. T. K. Monro investigated the case, and

made the following notes upon the 12th April, 1896:—

Girth of wrist just above styloid process (narrowest part of fore-arm), 6\frac{5}{8} inches on both sides; 3 inches below external condyle of humerus, on right side 9\frac{7}{8} inches, on left 9\frac{1}{2} inches; at deltoid insertion, on right side, 9\frac{7}{8} inches; on left, 9\frac{1}{2} inches; at mid-upper arm, right side, 10\frac{1}{2} inches; on left, 10\frac{1}{2} inches.

It appears to Dr. Monro, after careful examination, that a distinct, though very slight, difference can be detected between the two sides of the face. Even at rest the left naso-labial groove is scarcely so deep as the right, and the difference is quite as evident when patient is told to show his teeth. The ocular movements appear to be perfectly carried out.

It will be seen from the figures given above, that the left upper limb is, on the whole, slightly thinner than the right, but it must be remembered that patient is naturally right-handed. The greater relative thickness of the upper arm on the affected side appears to Dr. Monro to be possibly connected with a certain degree of permanent spasm of the left biceps.

It is found to-day that there is a certain tendency to ankle clonus on both sides, in so far as a single blow on the tendo Achillis will call forth several contractions of the calf muscles when the leg is in the appropriate position on either side. With a little trouble a fully established ankle clonus is obtained on the left side, though not on the right. Knee-jerk is well marked on both sides, and is particularly brisk on the right side. The cremasteric reflex is present on both sides alike, and the abdominal reflex is also obtainable on both sides. On first trial it is particularly brisk on the left side, but afterwards scarcely more so than on the right side.

Patient appears not to have been troubled at any time with

actual pain in the affected limbs.

Dr. Monro thinks the evidence conclusive that the lesion in this case is one impairing the integrity of the upper segment of the motor path within the cranium.

The fundi, on examination, seem normal.

14th April, 1896.—At 2 P.M. to-day patient had a rigor. No observations of his condition were noted (as he made no complaint) until 4 P.M. At that time profuse perspiration had broken out all over his body uniformly, and his temperature was 104°. On interrogating him it is found that he had a slight attack of ague on 11th April, which also passed over without complaint being made, and was therefore not noted.

16th April.—Patient had another attack of ague, beginning again at 2 P.M. to-day and lasting about six hours. The

maximum temperature was 103°.

Treatment.—12th April.—Patient to passively move the affected fingers for ten or fifteen minutes morning and evening, so as to gradually increase the maximum range of movement; the suppleness of the fingers to be increased by bathing and shampooing; the affected fingers to be regularly exercised as soon as possible by some mechanism resembling a key-board.

R Liq. strych, hydroc	:lılor.,			l dr.
Spt. chloroformi,				2 drs.
Inf. quassiæ, .			ad	6 oz.

Sig.—Half an ounce three times a day twenty minutes before food.

15th April.—

R.—Calomel.,		•		•		•	2 grs.
Sig.—To take during afternoon.							

1st May.—Stop liq. strychninæ.

R.—Pot. iod., Pot. brom.,	}		•	•			āā.	2	drs.
Tk. nuc. vor	•				•			1	dr.
Syr. aur., .		•		•			•	1	OZ.
Ãq., .		•	•	•	•	•	ad	8	OZ.

Sig.—Half an ounce three times a day.

2nd May.—Galvanic current, 5 to 10 milliampères, thrice weekly, positive pole at nape, and negative down spine and left arm.

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Since the patient was shown to the Society, the following additional notes have been made:—

6th June.—During his residence patient had one or two malarial attacks after those noted above. Since 2nd May, when galvanic stimulation was begun, his hand has been less spastic than before; the fingers can now be passively extended with the use of less force. The improvement, however, has been slight. Dismissed to the Home to-day.

26th June.—This man reported himself to-day on his return from the Home. No improvement falls to be noted in the condition of his hand. His general health, however, is much better.

August.—Nurse informs us that he is now an inmate of Stirling District Asylum, Larbert.

It is very difficult, in my opinion, to form any very precise diagnosis as to the actual site or nature of the cerebral lesion in this case. On the whole, I think there can be no doubt that the lesion is definitely related to the attack of enteric fever. It is perhaps more likely to be cortical than ganglionic, notwithstanding the absence of fits; and, having regard to what seems to have been a thrombosis in the vessels of the right thigh giving rise to swelling of the limb, it has most probably been of the nature of a surface thrombosis of the right motor convolutions.

Recently I asked my House Physician, Dr. J. D. Graham, to write to the authorities of the Asylum for information, and in reply to his inquiries he received from Dr. Alfred Cowper the following letter, which is an accurate and full account of the course of the case after passing out of our hands. I now, with Dr. Cowper's permission, publish it in full:—

"Stirling District Asylum, "Larbert, 8th Feb., 1897.

"Dear Sir,—As Dr. Macpherson is unable at present, owing to illness, to answer your letter, I take the liberty of giving you some particulars about J. J. He was admitted to this Asylum in July last labouring under an attack of acute mania, with delusions of grandeur. I presume you will wish me particularly to refer to the condition of his arm and leg (left), as that would probably be the affection for which he was under treatment with you, and it is the point about his case which has most interested us. Perhaps I needn't describe

particularly the condition of his limbs on admission, as possibly the symptoms were much the same when he was under your care, further than to say that the left arm had assumed a flexed position, while the left leg was kept stiff, and moved in a spastic manner when he walked. If, however, you should wish a detailed account of the affection I should be glad to tell you all I know. There was little or no atrophy apparent to the unaided eye in any of the muscles. At first we regarded the affection as spinal in its nature, and put it down as due to post-febrile paralysis. The usual methods of treatment were adopted, but without effect. During the application of faradism we noticed the response of the muscles to faradic irritability.

"In course of time we began to think that after all it might possibly be a case of a hysterical or functional nature, and we attempted to hypnotise the patient; but owing to his mental condition great difficulty was experienced in getting him under its influence, and the attempt was abandoned. His mental symptoms disappeared early in December, and we resolved to put him under chloroform. This was done, and it was found that when deeply under the anæsthetic his arm could be extended with great ease and moved about in every direction, with the exception of the metacarpo-phalangeal joints of the four fingers, which were stiff and quite

immovable.

"The points that guided us in inclining to a diagnosis of

the hysterical nature of the case were as follows:—

"1. The varying intensity of the symptoms. The flexion of the arm was not constant; at times it admitted of limited movement and a limited power of passive extension. But at other times the spasm in the flexors was intense, and manipulation was almost consciously resisted. The symptoms in the leg varied even more than in the arm.

"2. The comparative absence of atrophy of muscles considering the duration of his illness—since the middle of 1895. Measurements taken last month showed that while there was a degree of atrophy the greatest difference was between the

right and left thighs, which was only 1½ in.

"3. The apparently normal response of the muscles to faradic irritability.

"4. The complete disappearance of the symptoms under

deep chloroform narcosis.

"There were also the peculiar hysterical posture of the patient, and the difference between the symptoms in the two limbs.

"These are the main features of the case, as far as we have

got as yet.

"I was anxious to know in which ward of the Royal Infirmary the patient had been treated, as I should be very glad to get any information about his condition and treatment while there. It is possible we may publish the case, and we should be glad to hear from you if you have at hand any facts which may help to clear up the case.—Yours very truly,

"ALFRED COWPER,
"Assist. Med. Officer.

"Dr. J. D. Graham,
"Glasgow Royal Infirmary.

"I ought to have said that on coming out of the anæsthesia the first effort on returning consciousness was expended in the reproduction of firm flexion in the arm."

# MEETINGS OF SOCIETIES.

# GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING VI.—8TH JANUARY, 1897.

The President, Dr. W. L. Reid, in the Chair.

I.—ON THE DIRECT METHOD OF EXAMINING THE INTERIOR OF THE LARYNX BY KIRSTEIN'S "AUTOSCOPE."

By Dr. Walker Downie.

MR. PRESIDENT AND GENTLEMEN,—The instrument which I desire to bring before your notice to-night is the invention of Dr. Alfred Kirstein, of Berlin. It has been called by him an autoscope, because by it the larynx itself can be seen, and not a reflected image as we get with the help of the laryngeal mirror.

At various times attempts have been made to view the interior of the larynx directly, that is, without the aid of reflecting mirrors; and Dr. Kirstein is one of those who have devoted much attention to, and displayed much ingenuity in,

devising appropriate apparatus. He at first employed a metallic tube about 10 inches long. The patient was placed on his back on a table with the head dependent over the edge of the table; the epiglottis was anæsthetised with cocaine, and the tube introduced behind the epiglottis. The tube was illuminated by means of an electric lamp, and the interior of the larynx rendered visible.

In the instrument now employed the tube is replaced by a strong spatula or tongue depressor, which in the main is straight with a varying downward curve towards its laryngeal end. The lip of this extremity is thickened, and it is notched in the middle.

Prior to its introduction a hood is attached over the proximal end of the spatula by a sliding arrangement. This hood serves to keep the lips, the teeth, and, when present, the moustache from obstructing the view. This spatula portion is fixed to the handle at right angles.

The handle is that of Caspar's electroscope. It contains a small electric lamp near its upper end, the light from which is focussed through a convex lens, and then deflected 90 degrees by a small prism. By this means we have a bright light directed along the upper surface of the spatula to illuminate the parts beyond.

In the application of the instrument the surgeon stands in front of the patient, who sits in a chair with the neck thrown slightly forwards. The instrument is connected with a battery, and when illumination is desired, the current is closed by pressure on a spring, and the lamp lit. The inventor, in describing the application of the instrument, divides it into three stages:—

1. It is used like an ordinary tongue depressor for the examination of the cavity of the mouth, the fauces, and the buccal pharynx.

2. The spatula is passed further backwards, the handle is gradually raised, and at the same time pressure in a downward and forward direction is exerted upon the base of the tongue. In this position the lower portion of the pharynx is brought into view, and the anterior surface of the epiglottis, the epiglottic ligaments, and the glosso-epiglottic fissure can be fully examined.

In the third position, that for examination of the interior of the larynx and trachea, the handle is still further raised until the upper surface of the sliding hood comes into contact with the upper incisor teeth. The teeth, however, must on no account be used as a fulcrum to increase pressure on the base of the tongue, and when artificial teeth are present they should be removed prior to the introduction of the instrument. The various changes in the position of the instrument should be made under the guidance of the eye. In this third position the central glosso-epiglottic ligament should lie in the notch of the distal end of the spatula, and it will be observed, when pressure is exerted at this point, that the epiglottis may be so elevated as to expose the laryngeal cavity for inspection.

The arytenoid prominences, the inter-arytenoid membranes, and the posterior portions of the ary-epiglottic folds are readily seen in most cases. In tolerant subjects, the ventricular bands and vocal cords can be seen throughout the posterior half, or it may be two-thirds, of their entire length. I have not yet been able to see the anterior commissure of the cords, nor have I been able to inspect, with the instrument, the trachea to its

bifurcation.

I have now used the instrument for little over twelve months, and though at first I had considerable difficulty in its manipulation, I found, as with most things, that its application became more satisfactory the more frequently I employed it. Without attempting to go into detail, I may state my conclusions very shortly regarding its usefulness, thus:—

For examining the fauces and buccal pharynx—"the first position" in its application—it is a cumbrous apparatus, and

inferior to an ordinary Frankel's depressor.

For examination of the epiglottis and the deep portion of

the pharynx, it is very useful in many cases.

It chief value is in the examination of the posterior wall of the larynx—viz., the arytenoids and the inter-arytenoid membrane. On the laryngeal aspect of the inter-arytenoid membrane we have many serious lesions to deal with, which cannot be fully brought into view by means of the ordinary laryngeal mirror. By means of this instrument we can, in many cases, look directly on to this surface, not merely on to its upper border, but well down to and below the level of the vocal cords, and thus the extent of pachydermia, mammilloid growths, and ulcers, which so frequently affect this area, can be fully determined.

Irritability of the throat, and the position of the epiglottis, as in ordinary laryngoscopy, are the chief obstacles to be overcome before a satisfactory view of the parts can be obtained. The former may be greatly modified by the judicious use of cocaine applied prior to attempts at examination; and an overhanging epiglottis can be sufficiently elevated in the

majority of cases by firm pressure on the base of the tongue,

and through it on the glosso-epiglottic ligaments.

While it may be stated that this instrument will never supplant the laryngoscope, and that it cannot be used so freely as the laryngoscope, it will be found to be of great assistance in the examination of the inter-arytenoid area, and in the This, to my making of direct applications to that surface.

mind, is of great importance in larvngeal work.

Note.—In a paper published in the Therapeutische Monatshefte, July, 1896, Dr. Kirstein states that he finds it possible to view the interior of the larynx by employing an instrument of more simple construction, in reality the essentials of the autoscope—viz., a spatula of the form described above, fixed at right angles to a straight handle. The hood is dispensed with, and there is no electric connection, so the forehead lamp or mirror must be employed.

Dr. Newman considered the instrument to be of but little practical value. At the best it displayed only the posterior aspect of the internal surface of the larynx, which could be already easily seen with the larvngoscope. The chief difficulties in connection with the inspection of, and operations on, the larvnx were associated with the anterior part of the organ. where the autoscope gave no assistance. Some such instrument was introduced by the late Dr. Foulis, but in practice was found to be almost valueless.

Dr. Downie, in reply, maintained that the autoscope gave a more complete view of the posterior parts of the laryngeal cavity than could be obtained with the laryngoscope, and so enabled a more correct appreciation of the extent of lesions situated in this neighbourhood to be formed.

### II.—DEMONSTRATION OF GLIOMATOSIS OF THE SPINAL CORD AND SYRINGOMYELIA.

By Dr. John Love and Professor Joseph Coats.

Dr. Love introduced the subject of the demonstration by referring to various cases, recorded at different times, in which the existence of abnormal cavities in the spinal cord had been observed; he remarked upon the origin of the term syringomyelia, and showed how the definite clinical condition which it now denoted had been separated from the mere muscular atrophies; and, in conclusion, he gave a brief summary of the symptoms by which the disease is to be recognised. Dr. Love then submitted a number of microscopic slides, which he had prepared from four cases of the disease, and these were

demonstrated with the projection microscope by Professor Joseph Coats. The specimens showed the two tendencies of tumour development and cavity formation at various levels of the cord; and the different appearances were explained and commented on by Dr. Coats as the slides were successively thrown upon the screen.

Dr. Alex. Robertson congratulated Dr. Love and Dr. Coats on the success of the demonstration; he regarded the contribution as a most valuable one. Cavity formation in the central nervous system was probably not so very rare. He had seen a case some years ago in which there were numerous cavities in the brain substance, and was acquainted with other cases in which the symptoms had not been definitely those of syringomyelia, but cavity formation was found in the spinal cord.

Dr. Workman referred to the value of Malorey's method for displaying the extent of the gliomatosis by the brilliant staining it communicates to the spider-cells of the neuroglia.

### GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1896-97.

MEETING IV .-- 11TH JANUARY, 1897.

The President, Dr. Fraser, in the Chair.

I.—GASTROSTOMY PERFORMED FOR MALIGNANT STRICTURE
OF THE ŒSOPHAGUS.

By Dr. NEWMAN.

Dr. Newman showed a patient upon whom gastrostomy had been performed for malignant stricture of the cesophagus.

T. M'N., aged 45, was admitted to the Glasgow Royal Infirmary, under the care of Dr. G. S. Middleton, on the 8th October, 1896. The diagnosis of stricture of the esophagus was made and the patient transferred to the surgical ward.

Dr. Newman found a stricture of the esophagus at the level of the bifurcation of the trachea, and, as the patient was unable to take sufficient nourishment, he performed the first stage of gastrostomy on the 29th October, and the second stage on the 6th November. 1896.

The points of interest in the case may be mentioned. length of the thorax from above downwards was considerably above the average, and the arching of the diaphragm was correspondingly great. The patient's height was 5 feet 8 inches, and the length of the sternum 10 inches. The average length of the sternum in nine patients of the same stature was 71 inches, so that the patient's sternum was a little less than one-half greater than normal. When the abdomen was opened the stomach was found to be greatly retracted to the left, and drawn up in the unusually high arch of the diaphragm; consequently, when the finger was introduced the point did not reach the stomach, even although the incision in the parietes was close to the costal cartilages. With light from a forehead mirror the stomach was seen and drawn down with long artery forceps, and an area the size of a halfpenny was sutured to the deeper structures of the skin, but not brought through the epithelial covering, so that they were practically left as buried sutures. The external and internal oblique muscles were divided in the line of their fibres, so as to form a sphincter. The stomach was opened, without the employment of any anæsthetic, by passing a thermo-cautery through the wall of the viscus, and it is worthy of note that while this was being done the patient did not experience any sensation of pain, showing that sensory impressions in the ordinary sense are not felt in the wall of the stomach, The opening in the stomach was gradually dilated, and now the patient can feed himself with ease, and even after a meal the contents of the stomach do not escape through the artificial opening. A small dressing pad is hardly soiled after the patient has been walking about for some hours. The skin around the wound shows no signs of irritation.

Mr. Maylard said he had listened carefully to Dr. Newman's description; he had examined the patient, and he could not draw such favourable conclusions as to the results of the case. The sphincter was not really a sphincter, but more of a simple plug formed by mucous membrane, and the finger could be easily passed through without being much gripped, and fluid gushed out readily.

Mr. Clark said he had examined the patient, and he was rather disappointed with the sphincter result. He had had some experience lately in forming a sphincter in inguinal colotomy; the result being highly successful, but the opening

tended to become blocked with fæces, which had to be

scooped out.

Dr. Rutherfurd said he had little experience of the operations for constructing a sphincter, and he had difficulty in believing in the feasibility of the operation, as any interference with the adjacent muscles must interfere with the function of the muscle in two ways—viz., by causing atrophy of muscle fibre, and by the formation of cicatricial tissue.

# II.—NEPHRORRAPHY PERFORMED FOR CYSTIC DISEASE OF RIGHT KIDNEY.

#### By Dr. NEWMAN.

Dr. Newman also showed a patient upon whom nephrorraphy had been performed for cystic degeneration of the right

kidnev.

Mrs. M'N., aged 30, was sent to the Glasgow Royal Infirmary on the 24th November, 1896, complaining of pain in the abdomen and in the right loin. Briefly, the facts of the case were the history of sudden onset of pain in the right lumbar region, with rigors and painful micturition, following a natural labour, but without pyuria or elevation of temperature. pain was constant in its situation, and coincident with a large, rounded, but irregular non-fluctuating renal swelling, which was freely movable. Pain was aggravated by pressure or by displacement of the right kidney. The patient suffered from night sweats, constipation, flatulence, and almost constant nausea, and was rapidly emaciating. The swelling being nonfluctuating, the absence of high temperature and pyuria precluded pyonephrosis, abscess of the kidney, and tubercular disease, while the sudden onset of the symptoms, the age of the patient, and the absence of hæmaturia practically excluded malignant tumour. The physical characters of the swellingviz., its large size, rounded contour, and nodulated surface pointed to a kidney having undergone cystic degeneration; and probably the onset of the pain was accounted for by the enlarged kidney becoming movable after delivery. The kidney was exposed by a lumbar incision, a considerable quantity of loose adipose capsule was removed, and the organ sutured to the parietes. The patient, as now shown, is free from any discomfort, and the kidney is firmly fixed in the lumbar Since the operation the swelling has diminished in size, partly accounted for by the removal of the adipose capsule, and partly by the disappearance of pelvic distension present previous to the operation.

# III.—SUPRARENAL CAPSULE FROM ADDISON'S DISEASE.

By Dr. Eben. Duncan and Dr. Galt.

The patient, a male, æt. 43, bus-driver, was admitted to the Victoria Infirmary on 20th October, 1896. He complained of weakness of three months' duration. Before that he had noticed he was becoming yellow, and suffered from want of appetite and occasional vomiting. He weighed 11 st. in good health, but his weight had now declined to 8 st. 12 lb. His face and neck were greatly bronzed, the portion of his neck covered by coat being most markedly bronzed. There was also a patch on the buccal mucous membrane. The bronzing did not extend to the rest of the body. No organic disease could be made out. While in the Infirmary he digested liquid nourishment well. The urine contained a trace of albumen, but there was no evidence of disease of the kidneys. He was treated with tabloids of extract of suprarenal capsules, but the patient was too ill to hope for any good from any medicine.

Post-mortem.—The right kidney was somewhat enlarged, weighing 6 oz., and very hyperæmic, but was normal in structure. The left was partly cystic, the cysts containing inspissated pus. Fragments of normal kidney tissue existed between the cysts. The right suprarenal body was enlarged; it was firm on section, the cortical part being fibrous, while the central part was filled with caseous material in which tubercle bacilli could not be demonstrated. The left suprarenal body was of normal size, but showed the same changes as the right, though these were apparently not so far advanced.

Dr. Middleton said he had seen many cases of Addison's disease with little bronzing, but he had no special experience in the treatment of the disease with extract of suprarenal capsule. In one case of Addison's disease where the extract was used, there had been some diminution in pigmentation in the middle line.

Dr. Newman said he had examined the kidney, and the disease described as cystic was really due to an abscess in the kidney.

# IV.—LEUCOCYTHÆMIA, WITH DISEASED LIVER AND SPLEEN. By Dr. Eben, Dungan.

The patient, a boy, set. 15, was admitted to the Victoria Infirmary on 11th August, 1896, suffering from enlarged abdomen of two years' duration. The white blood corpuscles

were present in the proportion of 1 to 5. He took large quantities of bone-marrow tabloids without the slightest benefit, the white blood corpuscles increasing to 1 to 3. He also had splenic extract, but no good result could be detected. The spleen weighed 5 lb. 10\frac{3}{2} oz., and the liver 10 lb. 13 oz.

Post-mortem.—The spleen was adherent to the diaphragm above and behind, but was free beneath. The tissue is dense, and presents a perfectly smooth surface on section. The organ weighed 5 lb. 10½ oz., and measured 15½ inches in length. There is an old infarction on the convex surface. Microscopically, a simple hyperplasia was found, with comparative preponderance of fibrous tissue. The liver in this case weighed 10 lb. 13 oz., and was densely infiltrated with leucocytes, its structure being otherwise normal.

Dr. Middleton said that unusually enlarged liver was not a customary feature of such cases. He thought the enlargement

might be due to secondary lymphoid growths.

Dr. Duncan said that in two-thirds of the cases noted the liver was enlarged. There were no lymphoid growths, and

no enlarged glands.

Dr. Rutherfurd asked if the scar on the surface of the spleen was caused by an infarction, as gummata seemed out of the question.

# GLASGOW EASTERN MEDICAL SOCIETY.

Session 1896-97.
MEETING III.—13TH JANUARY, 1897.

The President, Dr. Alex. Patterson, in the Chair.

# ILLUSTRATIONS OF HYDROPATHY IN PRACTICE. By Dr. Alex. Robertson.

Dr. Robertson's paper consisted of four sections:—The first section was entitled, "The Cold Douche in Alcoholic Convulsions." A case was described, in which the patient, while in protracted convulsions, for the most part general, but to some extent unilateral, became deeply cyanosed and profoundly unconscious, and death seemed at hand. The cold douche was applied to the head for twenty-five minutes. The spasms ceased in the face in ten minutes, and in fifteen minutes more they stopped in the rest of the body. There was, however,

some failure in cardiac action, but it quickly passed away when the douche was stopped and heat applied to various

parts. The patient made a good recovery.

The second section was on "The Cold Douche in Functional Deaf-Dumbness." The patient was a girl of 13, who had manifested a variety of neurotic phenomena—mental, sensory, and motor. After severe convulsions she became deaf and dumb, and remained so for a number of days. Psychic impression—a method of treatment which Dr. Robertson said he had been using systematically for a considerable time—failed; so also did electricity intra-laryngeal. The cold douche was then used, when, after the application of a few kettlefuls of cold water to the head, both speech and hearing returned.

The third section was on "The Cold Douche in Morbus Coxe." The case occurred many years ago. It was that of a young lady, who had been an invalid through supposed disease of hip-joint for ten or twelve years. She had been subjected to much surgical treatment without benefit. Dr. Robertson (after examination and failure to find usual signs of true hip-joint disease) directed that one end of tubing should be connected with the cold water tap, and that by a branch fitted into the other end a full stream of water should be directed over the painful joint every day for ten or fifteen minutes. In three or four weeks she was quite well, and has continued so since—now about thirty years ago.

The fourth section was on "A Case of Hyper-pyrexia in Acute Rheumatism." The temperature rose within three or four hours to 107°. The cold bath was used, and afterwards cold sponging, with large doses of quinine. Alcohol was also freely administered. The patient made a good recovery.

#### REVIEWS.

A Short History of Aryan Medical Science. By H. H. SIR BHAGVAT SINH JEE, K.C.I.E., M.D., D.C.L., F.R.C.P.E., Thakore Saheb of Gondal. With Ten Plates. London: Macmillan & Co., Limited. 1896.

His Highness the Thakore Saheb of Gondal has made a notable contribution to the history of medicine. His Highness, in undertaking the preparation of an English treatise on

Hindoo medicine, has shown not only deep culture and great literary ability, but has proved himself to be animated by a noble and worthy patriotism, which has induced him to endeavour to make more fully known in Western countries the antiquity of the medical art in his own Eastern land. In some of the better known of our histories of medicine the accounts of the art, as it has been taught and practised in Hindoostan, are meagre to a degree. We have, indeed, a chapter in Sprengel which tells us very little; but in Le Clerc we cannot find that the subject is even mentioned. Withington's recently published Manual on Medical History, there is an excellent chapter on the subject, although of necessity it is most concise. Under these circumstances the volume of this cultured Indian prince is likely to be largely consulted by English readers interested in Aryan medicine.

As to the manner in which the author has accomplished his difficult task we have nothing but praise to bestow. With the exception of a few necessary details as to materia medica, authors' names, &c., the book is of surpassing interest from beginning to end. It seems, indeed, to give those interested in medical history additional food for reflection. We have usually in this country been taught to look back to ancient Greek, and, in a less degree, Egyptian medicine, as containing the germs of our modern knowledge and practice. But Sir Bhagvat Sinh Jee makes no secret of his opinion that Hippocrates himself derived much of his knowledge from Indian sages and their writings. Of course, this is largely a matter of opinion, and the opposite view has been very strongly expressed by Dr. Haas, who asserts that all Hindoo medical science worthy of the name is but a faint reflection of that of the Greeks. Indeed, he goes the length of saying that probably the greatest of the Hindoo medical writers, Sushruta himself, is none other than Hippocrates, whose name has been confounded with that of Socrates, and then Indianised. the whole, the author of this treatise may be a safer guide in this matter, and he asserts that the humoural pathology which has dominated medical teaching for about 2,000 years was borrowed by Hippocrates (460 B.C.) from the Indian physicians who taught that the cardinal humours of the body were three in number-viz., wind, bile, and phlegm, respectively.

In the course of an interesting chapter on the early civilisation of the Hindoos, the writer shows that the four sacred books of India—the Vedas—must have been composed about 4,000 years ago. The science of medicine forms that part of the Vedas called "Ayur Veda," composed by Brahma

himself, the book consisting of one hundred sections of one hundred stanzas each. As regards pure medicine, it is based on the Rig Veda; as regards surgery, on the Atharva Veda. Of course, if this be true, the Ayur Veda is the oldest medical book in the world, older indeed than "Sekhet'enanch, chief physician to the Pharaoh Sahura of the fifth dynasty (B.C. 3533?)," said by Withington to be the earliest known physician. Probably the greatest authorities on Hindoo medicine are Charaka and Sushruta, to the latter of whom we have already referred. There are most interesting chapters on hygiene, materia medica, medicine, and surgery, to which we cannot refer in detail.

We have recently in Glasgow been reminded by Dr. James Finlayson that Galen was a great authority upon the pulse, and that he was able to diagnose that a patient was in love by noting its characters. But it would seem that long before the time of Galen Indian physicians were well able to do this, and thus Sir Bhagvat suggests that the "prince of physicians" derived his knowledge on the subject from the works of Indian The following is interesting as an Indian account of the qualities of a physician: - "A physician is required to be always clean and tidy. For it is said that a physician who is dirtily and shabbily clad, conceited, foul-tongued, vulgar, and goes to a patient unasked, is not respected even though he be as clever as Dhanvantari. He should have his nails pared and his hair dressed, should have clean clothes, and carry a stick or an umbrella in his hand, wear shoes, and have a gentlemanly bearing. He must be pure-minded, guileless, pious, friendly to all, and devoted to truth and duty. His chief duty is to treat his patients honestly, and without desire of any gain." From this it is clear that among the ancient inhabitants of India the ideal set before a physician was a high one.

The chapter on the vicissitudes of Indian medicine and surgery is full of chronological interest, and is probably one of the most important in the book. Indeed, we think that the value of the treatise for English readers would have been greatly enhanced if more attention had been devoted to the subject of chronology, say, by the introduction of a carefully compiled table indicating the prominent dates of Indian history and medicine. The volume is provided with an excellent bibliography and alphabetical index, and we must

cordially recommend it to our readers.

Compressed Air Illness, or So-called Caisson Disease. By E. HUGH SNELL, M.D., B.Sc. Lond., London County Council Medical Officer to the Blackwall Tunnel. London: H. K. Lewis. 1896.

ALTHOUGH very large and important works have been carried on in this country under compressed air, comparatively little attention has been bestowed on the physiological and pathological effects from which the workers suffer, and Dr. Snell is able to claim that his is the first bock which has appeared on this subject in the British Isles. Having been appointed by the London County Council as medical officer in attendance on the men working in the Blackwall Tunnel, he had the best possible opportunities of studying the effects of compressed air, and gives details of fifty cases, out of a total of over two hundred which came under his observation. There was no fatal result, and all the patients, excepting some three or four, were able, after a longer or shorter period, to return to work in the compressed air; the effects, also, were for the most part trivial, for although there was one case of paraplegia, complete recovery took place in about a week. It will thus be seen that there was no case comparable with the one recorded in this Journal in July, 1893, where the paralysis affected both arms and both legs, was permanent, and was followed by extensive wasting of the muscles and the formation of large bed-sores.

In seeking for the cause of so light a calendar of illness, we notice two facts which may, in some degree, explain it, viz.—(1) that all the men who joined the works after Dr. Snell's appointment were subjected to a careful medical examination before being allowed to work in the air chamber; and (2) that a medical air-lock was provided, into which men who showed any pains or other symptoms supposed to result from too sudden "decompression," were submitted to "recompression," the pressure being gradually raised to about 18 lb., and very slowly reduced to the pressure of the outside air, or allowed to "leak out." Thus, then, if the record of cases Dr. Snell presents us with is tame and uninteresting, the cause is seen to lie in the success of the precautions taken and the treatment employed. So anxious were the London County Council to secure proper provision for the men working in the tunnel, that "they acquired parliamentary powers to grant relief to any men who might be injured by the action of the compressed air, or to their representatives in case of death. These powers were obtained because it appeared possible that

the Employers' Liability Act might not cover such accidents." In this respect the County Council set an example worthy of wide imitation, for it is at present a novel feature to find employers seeking powers to extend their liability to their workmen.

The most valuable part of Dr. Snell's book is the chapter on etiology, wherein he records the results of his own experience, and discusses the facts and theories of other writers. regards as the most important factors in the production of compressed air illness (1) the degree of air pressure; (2) the length of time the worker is in the compressed air; and (3) the ventilation. As regards the latter, the author considers that sufficient attention has not been paid to it as a cause of Dr. Hunter, in his report of cases occurring at the construction of the Forth Bridge, refers to the greater number of cases of illness when the concreting was in progress, and accounts for it by the production of carbonic acid gas from the concrete, and the imperfect renewal of fresh air, but no other writer makes mention of ventilation. Dr. Snell found a very distinct relation between the ventilation and the prevention of illness. Thus, grouping together all the days when the pressure was 25 lb. and up to 35 lb., with 4,000 cubic feet of fresh air per man per hour, the estimated cases of illness per hundred days was 315.5; with 8,000 to 12,000 cubic feet it fell to 80 cases per hundred days; and above 12,000 cubic feet per hour was only 33.3 per hundred days. He therefore concludes that the amount of illness varies directly with the lack of ventilation of the compressed air chamber. Of accessory causes of illness, he regards as most important "too rapid 'locking-out process' or decompression." This has been asserted by other writers to be the main and essential cause of illness, but the author justifies the less important position he assigns to it by pointing out that some of the men at the Blackwall Tunnel systematically used the air-cock provided for use in the transmission of material instead of that intended to be used during the ingress and egress of the workers. Thus, instead of occupying about four minutes in passing through the lock, the passage was accomplished in half a minute. These men either entirely escaped for compressed air illness, or had it in so slight a form that they did not require to stop their work. Dr. Snell seems, therefore, to be justified in assuming that rapid decompression is not so dangerous as has hitherto been held. Certain personal idiosyncrasies made some men more liable than others; thus, the young suffered much less than the old, the sober than the

drunken, and the fresh than the wearied. Men who had organic disease of the heart or lungs were mostly rejected, but one man who had emphysema was much better when in the chambers, and two patients with early phthisis did not come under the notice of the doctor from the time of his examination, when they were taken on, so that presumably they stood

the pressure well.

The author mentions one case as occurring in "some recent compressed air work at Glasgow," but regrets that he was unable to obtain full particulars, and does not know if any inquiry was held. We are sorry that no information has been made public as to accidents of this nature taking place in the tunelling of the Subway or the Harbour Tunnel; in the best interests of workers and employers alike such cases should be fully investigated, so that, as far as possible, the conditions of safe working may be ascertained.

Dr. Snell's work is not only of importance as treating of an important and little understood subject, but is still more valuable as demonstrating how much may be accomplished in the way of preventing illness among workers in com-

pressed air.

The book is concise, intelligible, instinct with commonsense, and, above all, practical.

A System of Gynecology. Edited by T. CLIFFORD ALLBUTT, M.D., and W. S. PLAYFAIR, M.D. London: Macmillan & Co., Limited. 1896.

It is impossible in the compass of a single review to notice all the essays in this volume. In general terms one may say that the names by which each individually is signed, are sufficient guarantee of adequate treatment. As might be expected from the recent developments of this subject, the surgical aspect of therapeutics is the one to which most attention is devoted, and this work may be safely used as a standard of reference, for learning details of modern surgical operations.

Dr. Berry Hart gives a clear description of the pelvic organs, the relations of these to the pelvic floor forming the chief divisions of his subject. The diagrams and drawings are good. Dr. Ballantyne, on malformations, treats of a subject he has made specially his own. Dr. Balls-Headley, in his etiology, informs us that a woman who pulls in her waist one inch places herself under a direct pressure of nearly 30 lb. The editor contributes a short article on the nervous system, but

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one worthy of careful study. He repeats, with all the weight of his authority, the warnings of the profession against educating girls like boys in school work, without the boys' games. He also warns the profession itself against a tinkering treatment of slight local lesions. In Dr. Routh's article on therapeutics we notice that the dilator figured as Dr. W. L. Reid's, is a pattern discarded from its insecure attachment of the head. Dr. Milne Murray gives us the result of his experience in electrical treatment, and writes as a scientific observer rather than as an enthusiast. It seems to us the most practical article on this difficult subject we have yet read. He recommends electricity in endometritis only where other methods have failed. In regard to fibroids, he claims that "Apostoli's" treatment does relieve the symptoms of hæmorrhage, pain, and pressure, and he insists that it is not alleged that tumours are necessarily dispersed or materially diminished. Dr. Halliday Croom takes up the subject of menstruction. He suggests that "Mittelschmerz" or inter-menstrual pain may arise in three ways, viz., from ovulation and menstruation occurring independently; from endometritis blocking up a slight inter-menstrual flow, which escapes with pain; and, thirdly, from the maximum development at mid-term of a hydrops Fallopii. We would take exception, for Scotland at any rate, to the statement of Sänger, apparently endorsed by Dr. Smyly, that acquired sterility after the birth of one child is due, as a rule, to gonorrhæa.

Prof. Simpson deals with the important subject, to the general practitioner, of displacements. He discusses posterior deviation under the name of retrorsions, including retro-versions and Injuries resulting from parturition are discussed by Dr. Herman, while the plastic operations to repair them fall to Dr. Phillips; his article is illustrated by numerous diagrams. Dr. Bland Sutton, in his extra-uterine pregnancy, is at one with Dr. Lawson Tait in believing that most, if not all, ectopic pregnancies are tubal. Under the heading of the differential diagnosis he gives a formidable list of possible errors, and, to reassure us, mentions several surgeons who have opened the abdomen in error—we have ourselves seen a surgeon remove a feetus when he expected to find a fibroid tumour—and warns against the grave mistake of being misled by the appearance of a feetus in its sac simulating a sarcoma, and attempting its removal in its sac, instead of opening the sac. In regard to the placenta he formulates the procedure, as the result of experience, thus:-If it be above the fœtus, attempt its removal (it may become spontaneously detached during operation and give no choice); if it be below the fœtus, leave it; if it be left and suppuration occur, open the abdomen and remove the placenta; if the fœtus have died previous to operation, the placenta may be removed without risk of hæmorrhage. Dr. Sutton italicises the dictum that if a woman have a tubal pregnancy it should be dealt with by operation In treating of pelvic cellulitis Dr. Cullingworth thinks it impossible to modify the inflammatory process when once lighted up. He specially warns against the routine exhibition of opium and of antipyretics. Care of the bowels and a generous diet, including meat, are recommended, even when the patient's temperature is high. He also warns against the risk of permanent knee-flexion resulting from the prolonged decubitus. He advocates raising the heel, to straighten the knee, twice daily. In pelvic peritonitis opium is more frequently required to allay the pain. To allay flatulent distension he advises a rubber tube to be left in the bowel for fifteen minutes at a time; also turning the patient. from one side to the other. He discusses vaginal hysterectomy for inflammatory disease of the adnexa.

Sir Wm. Priestly, in treating of hæmatocele, is strictly conservative, and recommends palliative treatment in the majority of even intra-peritoneal cases. Dr. Haultain discusses. benign growths of the uterus. He divides his submucous fibroids into two classes, "encapsulated" and "free," according to the presence or absence of a muscular capsule, depending on the site of origin of the tumour. The distinction is of clinical and practical as well as of theoretical interest. Dr. Haultain is a believer in the "Apostoli" electrical treatment of fibroids. Malignant disease of the uterus is treated at length by Dr. Sinclair, to whom is assigned hysterectomy in this condition, while hysterectomy generally is left to Dr. Knowsley Thornton, who includes the Cæsarean section. He is a strong advocate of operation at an elected time, not necessarily during labour. He recommends the application of the elastic ligature where hæmorrhage is severe during the incision of the uterus. Having ourselves repeatedly operated with and without Dr. M. Cameron's pressure ring, we can unhesitatingly say it has proved of the greatest use in controlling hæmorrhage at this stage. We are somewhat surprised to find Dr. Thornton advocate draining the uterus per vaginam with strips of iodoform gauze to be left in situ for forty-eight hours. He satisfies himself before operation that the cervix is patent, and that the uterus contracts properly, but he does not describe his. method of dilating the cervix, nor does he mention the very

great advantage of operating before rupture of the membranes. Mr. Doran describes at length disease of the tubes, including actinomycosis and its treatment by iodides, and deciduoma malignum of the tube. Dr. Griffiths takes up diseases of the ovaries. He suggests postural treatment for prolapsed ovaries; if the ovary be adherent, he recommends the release of the ovary and its fixation higher up in preference to its removal. Mr. Henry Morris has an interesting, if short, article on the bladder. His remarks on the incontinence of children are good. For chronic cystitis he advocates the use of parsley, long in use in France; where cystotomy is required he prefers the hypogastric method.

The work is issued in a form most creditable to the

publishers.

Aids to Medicine. Parts I to IV. By NORMAN DALTON, M.D. Lond., F.R.C.P. London: Baillière, Tindall & Cox. 1896.

MANY points in this production are exceedingly good. Especially to the beginner its style should be very grateful, and the concise method in which its chief points are brought out ought in considerable measure to further its intended mission as an "aid" to the teaching of the healing art in its first principles.

It is not, however, satisfactory from every point of view. It has many deplorable inaccuracies, and not a few questionably commendable precepts to detract from its merits in other

wavs.

When one is suddenly confronted with such a statement as the following, one may be pardoned something more than a slight feeling of dissatisfaction:—"The common anæmia of young women is called chlorosis, because that is the chief change in the blood." Whether this statement is to be explained by the context or not is of little moment. In itself the sentence, besides being vague in the extreme, is stilted and wooden.

Again, should not "pulmonary valve" in the reference to "systolic bruit over the pulmonary valve" in chlorosis be rather "pulmonary cartilage;" it would, at any rate, prevent giving rise to the obvious assumption that it is caused, necessarily, by some valvular lesion.

"The marrow of bones in pernicious anæmia," it is said, "may show the same corpuscles with excess of marrow-cells, and to the naked eye it is pink and diffluent rather than

fatty;"-it is surely not thus doubtfully pink, but most

indubitably red.

At the very outset of the remarks on gout an ultra-dogmatic statement is certainly startling. "The morbid condition in gout is an excess of uric acid in the blood." Surely a definite statement, even on this, is hardly possible. Besides "quadurate" ought to be "quadrurate."

Points like the above might be multiplied, but one more may suffice:—With regard to typhlitis, appendicitis, &c., and their treatment, palliative remedies are given, and possible

surgical interference merely suggested.

In the light of present-day surgery, is it not putting it too mildly to state that "surgical treatment in the shape of the evacuation of pus and the removal of the appendix may be necessary." Surely it is one of the very axioms of surgery that pus, wherever present, must—not "may"—be evacuated, as soon as possible, on its recognition.

Despite deficiencies, however, these "Aids" will, no doubt, find a place in the student's library, and, in some measure at

least, prove efficacious.

Braithwaite's Retrospect of Medicine. Edited by James Braithwaite, M.D. Lond., and E. F. Trevelyan, M.D. Lond. Vol. 113, January to June, 1896. London: Marshall, Hamilton, Kent & Co.

A QUIET perusal of this volume shows that all the material contributions to surgery and medicine during the period covered have been carefully gathered from the wellnigh overwhelming mass of current periodical medical literature. On first reading the book we are forcibly struck by two facts—viz., the numerous extracts from American authors, and the large number of extracts dealing with bacteriology as related to etiology, diagnosis, and treatment of disease. On these subjects "Braithwaite's" gathers together most of the points worthy of permanent record. There is also recorded a notable amount of experimental work with animal extracts in the treatment of disease. The chief topics of the day in medicine, surgery, and obstetrics are well represented.

The volume maintains the high reputation of the "Retrospect" series, and more than ever can be recommended as a substitute to the busy practitioner for the scattered medical

literature of to-day.



Catechism Series. Surgery: Parts II to IV. Edinburgh: E. & S. Livingstone. 1896.

THESE numbers of above series are doubtless good samples of the type. At some schools of medicine the "Catechism" idea seems to he a fundamental article of faith, and so there abound publications such as these. Of all and sundry the same might be predicated—viz., that they supply a fairly complete series of questions regarding the particular item of study more immediately under discussion. Doubtless they all fail in omitting points here and there, and, of course, these are the very points an examiner is sure of pouncing on. The system of catechism forms, no doubt, a method of drumming into the dullard a little more knowledge than he might otherwise assimilate, but one cannot help thinking that to the average individual it is a. much more congenial thing to get up his work in a regular systematic course of reading and clinical investigation. are not of those who would lay stress upon the student having a thorough knowledge of detail in all his work; we would rather have him dispense with the parrot-like style apt to be acquired from the use of the "Catechism" Series; rathershould he strive to assimilate the general principles which govern the various branches of his work, and he will, by a judicious practice of his own reasoning faculties, acquire the details in a more rational and satisfactory way.

Of its kind, no doubt, this series is a good specimen, and it is well illustrated by explanatory diagrams. To those who are attracted by this mode of acquiring knowledge, its use may safely be commended. A good deal of care must have been expended in its compilation, and it is comparatively free

from flagrant inaccuracies.

Kirkes' Handbook of Physiology. Fourteenth Edition. By W. D. HALLIBURTON, M.D., F.R.S. London: John Murray. 1896.

THERE is no doubt of the appreciation with which this time-honoured text-book of physiology is regarded. It has served, and served well, a goodly succession of students of medicine, and so long as it is kept up to date it is likely to retain its place as one of the most valuable text-books on the subject. This, the latest edition, is certainly well up with the times, and the name of Dr. Halliburton at once ensures and guarantees. its thoroughly careful construction. It is at once to be noted.

that this edition has been so largely rewritten and so freely rearranged, that it is—in the words of the author—practically "a new one." In its eight hundred odd pages the ground covered is indeed very considerable. Dr. Halliburton has seen fit to preserve one of the special features of previous editions viz., that it treats of histology as well as of physiology proper. It is, however, questionable how far this is commendable, for it is coming more and more to be usual for histology to be embodied in the scope of anatomy and anatomical text-books. More particularly is it questionable how far it is advisable to embody a treatise on embryology in an ordinary physiological text-book. Still it must be said that both of these branches are treated in a very careful and intelligent way, the chapter on embryology giving a very clear, though short, survey of the main points at present known.

As regards histology, the plates are in many cases coloured, as in sections of tissue stained for microscopical examination,

and these are, indeed, quite a pleasing feature.

The chapters on nerve and muscle are exceedingly complete, and embody all the latest known facts regarding their physiological structure, normal action and reaction to electrical and other stimuli. Perhaps, however, the most striking characteristic of this edition is the very concise nature of the teaching as regards the chemico-physiological processes involved in the various bodily, assimilative, metabolic, and kindred functions; thus, the chemistry of the blood, urine, food, &c., are treated in the masterly manner that one would expect from the pen of Dr. Halliburton, whose qualifications to write on these subjects are of the most pre-eminent type. Over six hundred illustrations, for the most part well chosen, serve to make this edition in every way a useful and desirable text-book for the student of medicine.

Hints on Elementary Physiology. By FLORENCE A. HAIG BROWN. London: J. & A. Churchill. 1896.

THE Hints are, as is stated in the preface by William M. Ord, founded upon notes taken by Miss F. Haig Brown and her sister, Miss Helen Haig Brown, of the lectures and demonstrations given by the medical officers of St. Thomas's Hospital entrusted with the duty of giving such elementary instruction to the probationers as may help to fit them for the discharge of their duties in the wards. As such, this little book of one hundred and twenty odd pages is very much to be commended.

No. 3. P Dialitized by ALVIII

Elementary, without being painfully so, it contains in a series of fourteen short chapters a very careful and creditable synopsis of the known facts regarding the physiological processes characterising the various organs and body tissues, supplemented by chapters on "Inflammation," "Food and its Uses," and "Ventilation." For the use of probationers, junior nurses, and even many others, it is really an excellent educative factor of its kind.

Electro-Physiology. By W. BIEDERMANN. Translated by FRANCES A. WELBY. Vol. I. London: Macmillan & Co., Limited. 1896.

This volume of some five hundred pages is the first instalment

of a work devoted to the subject of electro-physiology.

The literature in this branch of science, as the author tells us in his preface, is very extensive, and in many cases somewhat inaccessible. And so the aim of the book is to survey the whole subject in such a way that there may be presented to the reader a synopsis of the work done, and of the opinions held, on the various points which may come up for consideration.

The first chapter is devoted to the "Organisation and Structure of Muscle," and in it there are descriptions of various types of muscle-fibres or their analogues, as one meets with them in the range from protozoa to mammalia. The striation of muscle-fibre, both when at rest and when contracted, is also fully dealt with.

The second chapter has to do with the "Change of Form in Muscle during Activity," and it is shown with considerable detail how various conditions, such as the nature of the muscle itself, the strength of the stimulus, the tension of the muscle, fatigue, temperature, &c.—how these may all affect muscular contraction. Conductivity of muscle, i.e., its power of transmitting localised stimulus, is also considered in this part of the book.

The "Electrical Excitation of Muscle" is next gone into in an exhaustive manner. This forms a chapter of great importance; and the various points at issue are treated logically and fairly. Clinicians might well study it in view of the electrical tests they apply to paralysed muscles.

Chapter four deals with the "Electro-Motive Action in Muscle" while at rest and while contracted. The last chapter of the volume is devoted to the "Electro-Motive Action of

Epithelial and Gland Cells."

Such, then, are the contents of the first volume; and if the rest of the book deals with the rest of the subject in the same thorough manner, we cannot but have a work which will be of the greatest service to students of physiology. Of course, one recognises that an historical account of scientific research is often at best wearisome reading, and to this we are not prepared to make an exception in favour of the book we are now considering. And so it is likely to be regarded rather as a book of reference than for general use.

The translation seems to be accurately and carefully executed. In places it is possibly too literal, clearness seeming to be sacrificed so that the form of the German sentence

may be retained.

The book is well printed, well illustrated, and in every way well worthy of the publishers.

On Gall-Stones or Cholelithiasis. By EDWARD MANSFIELD BROCKBANK, M.D.Vict., M.R.C.P. Lond. London: J. & A. Churchill. 1896.

THIS work is an expansion of an inaugural dissertation for the degree of M.D., and does credit to its author. It is an excellent and very full monograph, dealing with the anatomy and physiology of the biliary passages in health and disease, and with the symptomatology and medical and surgical treatment of gall-stones. There is a subject index, and an index of authors referred to.

Dr. Brockbank agrees with Mayo Robson that the cloudy appearance produced in bilious urine by the addition of a drop or two of acid is due to precipitation of bile acids. These are much less soluble in water than are the bile salts, and are liberated from the latter by acetic or a mineral acid. According to other authorities, the precipitate consists of mucin, or

of some albuminous body, or of bile pigments.

Subsidiary questions of this kind are discussed in a satisfactory manner. Another which may be alluded to is the explanation of the beneficial action of olive oil—a mode of treatment which Dr. Brockbank describes as "at best an unpleasant one." Fortunately this has not been our own experience; at least, the smaller doses recommended by Dr. Brockbank seem to be easily taken by some people. The good results attributable to this remedy are regarded by Dr. Brockbank as due to a combination of causes:—(1) The

depressant effect of large doses of oil may relieve the spasm in the walls of the bile-ducts; (2) some of the oil absorbed into the blood as such or as fatty acid and soap, and passing through the hepatic cells into the bile, may exercise a considerable solvent action on gall-stones; and (3), as Rosenberg suggests, the presence of a large quantity of oil in the duodenum may set up a reflex expulsion of bile from the biliary passages, and may thus either lead to the washing out of a small obstructing calculus, or at least create a demand for more bile, and so prevent stagnation.

Manual of Diseases of the Ear. By Thomas Barr, M.D. Glasgow: James Maclehose & Sons. 1896.

WE gladly welcome the appearance of the second edition of Dr. Barr's text-book on the diseases of the ear. We consider it in every way to be a great advance upon the first edition. The subject matter has been brought well up to date, and the illustrations are, for the most part, excellently executed. Here and there we have noticed slips which, however, do not materially take away from the value of the book. Fig. 97. p. 127, has obviously been placed upside down. The treatment of nasal polypi, as embodied in the following quotations. we must take exception to, as in our opinion it is based upon an erroneous pathology:—"by traction the growth is plucked from its attachment to the mucous membrane," and "the employment of spirit spray for some weeks after the removal of the polypi tends to shrivel up any roots which may remain." The book is an accurate and reliable guide to the diagnosis and treatment of the special diseases of which it treats, and as such may be confidently recommended to practitioners and students alike. The publishers also deserve great credit for the very satisfactory manner in which they have produced the work.

Formulaire des Médications Nouvelles. Par le Dr. H. GILLET. Paris: J. B. Baillière et Fils. 1896.

This exceedingly compact, and, on the whole, commendable production, partakes somewhat of the same nature as we have exemplified in our *Medical Annual*. While not treating only of such remedies and medical discoveries as belong more particularly to the year immediately past, its general plan is

such as its title indicates. Older remedies, older therapeutic agencies and methods are touched on, and, according to their importance, at greater or lesser length. Where, too, new uses for old drugs, and new methods of applying such, are found worthy of note, they are shortly but clearly indicated, and with the general effect of the survey contained in the two hundred odd pages of this work, little can be said but what is to its credit. Explanations of methods, reasons for their application, indications for their use, and contra-indications to be carefully watched, all are clearly and succinctly stated. To those versed in the French language it will be a useful acquisition.

# ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### PHYSIOLOGY.

By WILLIAM SNODGRASS, M.A., M.B., C.M.

The Archives de Physiol. Norm. et Patholog. for January, 1897, contains many contributions of much interest. Among others, we have a study of "The Variations of the Refrigerating Power of Water as regards Temperature and Time," by J. Lefèvre. 1. In regard to time. At each temperature, refrigeration presents two periods, one variable, the other stationary. The variable period is very short at low temperature, and lengthens rapidly as the temperature rises. During the stationary period, the loss is reduced to about the fifth part of that of the former period. 2. Refrigeration increases, and with constant acceleration, as the temperature falls. Both man and all homoiothermal animals when submitted to the action of cold water lose a quantity of heat, which rapidly increases as the temperature falls, and at 5° C. the amount lost is about double that theoretically obtained by Newton's law.

"The Coagulability of Hepatic Blood" has been studied by Paulesco. In fasting dogs, the rate is practically the same as in the general venous blood. On the other hand, blood from the liver during digestion coagulates more slowly.

"The New Formation of Nerve-Cells in the Brain of a Monkey, consecutive to Complete Ablation of the Occipital Lobes," is discussed by Prof. A. N. Vitzou, of Bucharest. He discusses the question of new formation of nervecells from a historical standpoint, and then gives details of an experiment performed by himself. The occipital lobes of a young monkey were removed, and the animal remained perfectly blind for about three and a half months. Then gradual reappearance of function was noticed. At the end of two years and two months it would avoid objects it met in its way, a thing it could not do during its earlier months. A second operation was then performed; the cranial cavity was filled with new formation, which was removed. On microscopical examination it was found to consist largely of nerve-cells, medullated fibres, neuroglia cells, and blood-vessels. The only difference between this tissue and that of the lobes previously removed consisted in the small number of nerve-cells in the new formed substance, and the abundance

of connective tissue nuclei. After the second operation, the animal was again totally blind for four months, but it is not stated whether there was any further improvement. Vitzou concludes that the brain of a young monkey has the power of reproducing material lost by operation, and of regaining part, at least, of its anatomical and physiological properties. The functional return of vision, lost by ablation of the occipital lobes, has for its cause the new formation of substance of a nervous nature, with nerve-cells and nerve-fibres.

F. J. Bosc and v. Vedel have experimented on the "Effects of Large Intravenous Saline Injections," more especially in animals inoculated with some infective disease. The injections favour the elimination of the toxic substance—(1) By the osmotic and diuretic action of the common salt; (2) by increasing the activity of the blood-forming organs; and (3) by diminishing the destructive

power of the serum, and by favouring phagocytosis.

W. H. Thompson, of Belfast, has studied the "Vaso-motor Effect of Peptone." Witte's peptone, in doses of 10 mg. per kilo. of animal weight, lowers arterial pressure when injected into the circulation of the dog. The mechanism of this is peripheral, and the influence is general. It depresses the irritability of the neuro-muscular apparatus of the vessels, rendering this mechanism incapable of ordinary vaso-motor impulses—and probably through the nerve-ending rather than the muscle.

Wertheimer and Lepage give results of experiments showing that each cerebral hemisphere has direct relations with both sides of the spinal cord.

Lamy details results of experimental lesions of the medulla.

E. Riegler describes in the Wien. Med. Blat. (1896, p. 323) a simple, quickly performed, and accurate method of estimating the amount of urea in urine. The principle of the method lies in the decomposition of urea by means of Millon's reagent into CO<sub>3</sub> and N. From the volume of gases evolved, the amount of urea is ascertained.

### DISEASES OF CHILDREN.

By JOHN LINDSAY STEVEN, M.D.

Syphilitic Pseudo-Paralysis, or Parrot's Disease (Syphilitic Osseous Dystrophy).—By Dr. Moncorvo, of Rio de Janeiro. This is an important paper upon a morbid state of the bones of syphilitic infants rarely seen in Glasgow. The author refers to the frequency of hereditary syphilis in Rio, and in the course of a historical introduction shows that Parrot demonstrated in 1869 the causal relationship between this loss of motor power and the infection of hereditary syphilis, to which he attributed the bony lesions regarded as the basis of the pseudo-paralysis (Arch. de Physiologie, 1872). The lesion consisted of atrophy of the spongy and chondro-calcareous tissues of the diaphyseal extremities, with separation of the epiphyses. Dr. Moncorvo in this paper gives details of three cases, and refers to eight others which he has already published in the Gaz. Hebdomadaire (Paris, 1892 and 1893). The affection always sets in during the early months of life-in eleven cases, the oldest was 3 months, the youngest a month and a half. The cases may be classified according to the intensity of the manifestations of the hereditary syphilis. The affection is not necessarily symmetrical; and the peculiar symptom of this specific osseous lesion is merely a more or less sudden loss of motion in the affected limb due to a solution of continuity of the bony lever from the separation of the epiphysis. There is pain on movement, and circumscribed cedema around the affected end of the bone. Usually there is no history of traumatism. Under careful anti-syphilitic inunction the cases generally recovered in two or three weeks.—(Pediatrics, January, 1897, vol. iii, Nos. 1 and 2, pp. 1, 49.)

[With regard to the "fearful prevalence" of syphilis amongst all classes in Brazil, we would in this connection refer our readers to an important paper

entitled "Syphilis and Marriage," by Dr. W. Loudon Strain, published in this *Journal* for February, 1891, p. 89. A very careful study has been made by Dr. Strain in this paper of the effect of syphilis in the parents upon procreation.—Ep.]

Pleurisy in Children.—At the Pan-American Medical Congress held in Mexico City in November last, Dr. F. Baquero read a paper on the treatment of pleurisy in children, referring chiefly to the after-management of cases in which pus had been evacuated by operation. He criticised chiefly the objections of those who hold that lavage should not be employed on account of the risk of syncope, or rupture of adhesions, or prevention of lung expansion. Dr. Baquero believes in a thorough lavage of the cavity, not forcibly or roughly, but gently, so as thoroughly to remove pathogenic products, and carried out in such a manner as to permit of a free escape of the fluid.—
(Pediatrics, January, 1897, p. 30.)

Hydræmic Ascites and Anascara.—At the Pan-American Medical Congress, November, 1896, Dr. Miguel Otero, of San Luis Potosi, Mexico, read a paper with this title. He had first described this affection as a clinical entity in 1894, and a larger experience now enabled him to treat of it more in detail and with greater precision. In its full development the disease is seen in children between the ages of two and a half and fifteen years, but it occurs also in milder forms in nursing-infants as well as in adults and the aged. The disease is the result of defective alimentation, and in almost every instance,

without exception, is preceded by a long period of diarrhea.

In the typical form of the affection the abdomen becomes greatly distended, and the children move about with difficulty, although they complain but little. The face is edematous, the eyelids are puffy and waxy-looking, the hands and feet are swollen. The lungs, heart, and spleen are usually normal, and examination of the urine is negative. The stomach is enormously dilated. The number of red blood globules is reduced by 50 per cent or more, and the hæmoglobin is also proportionately reduced in amount; exceptionally the leucocytes are slightly increased in number. When the case is seen in time a tonic and supporting treatment is usually quickly curative. At the autopsy of cases which have been brought to the hospital at so advanced a stage as to be beyond the help of treatment, all the organs were apparently normal, with the exception of the dilated stomach; the tissues, however, were strikingly

pale in colour and were markedly edematous. Many cases diagnosed as infantile hepatic cirrhosis are tuberculous in nature, the process being confined to this organ, and the symptoms are very similar to those just described. The diagnosis between simple hydræmic ascites and that resulting from hepatic tuberculosis is often very difficult or even impossible to establish with certainty. When there is an elevation of the body temperature the case will usually be found to be one of tuberculous hepatitis; but when fever is absent it may be necessary to extract a particle of the liver tissue by the harpoon in order to subject it to a microscopical examination. diagnosis from tuberculous peritonitis is less difficult, for in hydræmic ascites the abdomen is not painful, either to deep or superficial pressure, or spontaneously. In cases of tuberculosis of the peritoneum there is an evening rise of temperature, and the tubercle bacilli can often be found in the fluid removed by paracentesis; there are usually some signs of pulmonary involvement; the diagnosis may also be aided by the results of treatment, tonics having little or no effect in tuberculosis, either of the liver or of the peritoneum.

In the case of the new-born or of nursing-infants the signs of gastro-intestinal atrophy, as described by Parrot, may resemble those of hydræmic ascites, but the distinction between the two affections becomes more evident in their further

progress.—(Pediatrics, January, 1897, p. 32.)

A Case of Hypertrichosis Universalis.—Lesser (Correspondenzbl. für Schweizer-aerzte, 1896, xxvi, 355) presented to the Med. Pharmac. Bezirks-

verein-Bern., a girl, 6 years of age, who was a perfectly normal child until two years ago, when the abnormal development of hairs began. At present the whole body is covered with a growth of hair, particularly the lower extremities. The growth of hair on the mons veneris is remarkably thick, and she has well developed whiskers. The hair of the head is normal in quantity. The girl's breasts show well developed nipples and areola, as in a full grown person; her whole habit, the outer shape of the pelvis, are those of an adult. At the age of three years the girl menstruated for the first time, the flow being copious and its duration six to seven days; during the following year and a half menstruation recurred eight to nine times at approximately regular intervals. During the last year and a half it has not made its appearance. The mental development of the patient is also remarkably advanced. Nothing is known as to the presence of sexual emotions except that the child is said to frequently scratch the genitals. The parents and older brothers do not show any abnormal growth of hair, but her two youngest brothers, 12 and 16 years of age, show an early development of the beard.—(Pediatrics, January, 1897, p. 40.)

Warm Baths in the Treatment of Children's Diseases.—Dr. Renant (Therap. Wochenschr., 1896, i, 14) recommends the systematic use of warm baths for seven or eight minutes at a time, and of a temperature of 38° C., in all cases of acute bronchitis and capillary bronchitis, whenever the temperature of the patient reaches 39° C. The baths should be given daily, a little water at the room temperature being allowed to trickle over the child's head while it is in the bath. This treatment is to be combined with ordinary expectorant and supporting measures. The bathing may be continued from one to three weeks.

Dr. Wolisch (Therapeut. Monatshefte, 1896, x, 254) recommends a somewhat similar method of treatment for cerebro-spinal meningitis in children. The child is lowered in a sheet into the bath at a temperature of 26° to 27° R., and hot water is added till 32° R. is registered. The ice-bag is applied to the head while patient is in the bath. The theory is that the induced hypersemia of the skin and surface relieves congestion of brain and cord, and acts like venesection without loss of blood. The sweating that usually follows a bath is also supposed to remove toxins.—(Pediatrics, January, 1897, pp. 44, 47.)

An Epidemic of Glandular Fever—"Drusenfleber" of E. Pfeiffer—(Jahrbuch für Kinderheilkundt, 1889, xxix, 257).—Dr. J. Park West, of Bellaire, Ohio, records in minute detail the chief characteristics of an epidemic of this somewhat rare disease, which occurred in the country practice of Dr. F. A. Kierell, of Businessburgh, Ohio. In all, about 136 cases occurred, 96 of which were medically observed. In addition to a general febrile malaise, the most marked feature in all the cases was the enlargement of the cervical, or to be more definite, the carotid lymphatic glands, beginning, as a rule, on the left side, and then involving the right, rarely both sides simultaneously. The writer is quite sure that the cases were not mumps, in which the salivary glands were not affected, as numps was not prevalent in the district at the time. The beginning of convalescence was often ushered in by a critical diarrhea. In its chief aspects the epidemic corresponded to Pfeiffer's original description of gland fever.—(Archives of Pediatrics, December, 1896, p. 889.)

Observations and Researches on the Meningococcus Intracellularis of Epidemic Cerebro-Spinal Meningitis (Weichselbaum-Jaeger).—Professor O. Heubner has made an important contribution on this subject from his clinique on children's diseases at the Charité in Berlin. His object is to confirm the previous researches of Weichselbaum and Jaeger, which seemed to indicate that epidemic cerebrospinal meningitis was due to a specific micro-organism, by the former observer called the ''diplokokkus intracellularis meningitidis." Weichselbaum found the organism in six cases, regarding it as distinct in character and mode of

growth from the diplococcus pneumoniæ; Jaeger, in ten fatal cases occurring in military practice, confirmed Weichselbaum's conclusions, and he is even more convinced than the Viennese professor of the specific nature of the organism. Professor Heubner in this paper records five cases of cerebro-spinal meningitis in which he removed some of the fluid by the lumbar puncture, thereafter subjecting it to examination by the microscope and by culture. So far his observations confirm those of Weichselbaum and Jaeger. These observers had found that the ordinary laboratory animals—the mouse, the rabbit, the guinea-pig—could not be inoculated in such a way as to produce cerebro-spinal meningitis. Heubner, however, on veterinarian advice, tried his culture on goats, and succeeded in producing the disease. He also concludes that the epidemic form of the disease is due to a less virulent microbe than the sporadic forms.—(Jahrbuch für Kinderheilkunde, Band xliii, Heft 1, September, 1896, S. 1).

Congenital Stenosis of the Pylorus in Children.—Important papers on this subject have been contributed from the Charité Clinique at Berlin, by Dr. H. Finkelstein, of Berlin, and Dr. Chr. Gran, of Christiania. The former author gives an abstract of the literature of the subject and brief outlines of previously recorded cases. He then describes in detail a case which came under his observation at the Charité on the 18th February, 1896, and in which on deep palpation a small tumour could be felt a little above the umbilicus to the right of the vertebræ. The child was aged 3 months, and died two days after admission. The diagnosis of dilatation of the stomach with congenital thickening of the pylorus causing stenosis was confirmed by the post-mortem, when it was found that the hypertrophy had affected the straight rather than the circular fibres of the pyloric wall. The paper concludes with a discussion of the pathology and diagnosis of the condition. Dr. Gran's paper is based upon the observation of three cases, one of which is described in great detail both as regards the clinical manifestations and the post-mortem appearances. He distinguishes between atony and dilatation of the stomach, and believes that by careful physical examination it is possible to make the distinction during life. In a dilated stomach the enlarged condition must be more or less permanent; in an atonic stomach, with motor insufficiency, the distension of the stomach varies from time to time, a point which was determined by inflating the stomach at different times during life by means of a tube.—(Jahrbuch für Kinderheilkunde, Band xliii, Heft 1, S. 105, et seq.)

[In connection with these cases it may be mentioned that in the Glasgow Medical Journal for June, 1889, p. 416, a case of congenital stenosis of the pylorus in an infant was recorded by Dr. W. K. Peden.—Ed.]

Quincke's Spinal Puncture.—The operation of puncturing the spinal canal and drawing off some of the fluid for purposes of diagnosis or treatment, instituted by Quincke, has received considerable attention from physicians, especially pediatric physicians, during the last year. For a full account of the mode of operating and the inferences to be drawn from the results obtained, we would refer our readers to the Jahrbuch für Kinderheilkunde, Band xliii, Heft 2 u. 3, S. 302, et seq.)

Literature.—"Traité des Maladies de l'Enfance," publié sous la direction de MM. J. Grancher, J. Comby, and A.-B. Marfan. Tome Premier. Paris : Masson et Cie. 1897.

"Ueber die Tuberkulose im Kindesalter," von Dr. Adolf Dennig, Privat Docent zu Tübingen, mit 20 Kurven im Text. Leipzig: F. C. W. Vogel. 1896. "The Natural and Artificial Methods of Feeding Infants and Young

"The Natural and Artificial Methods of Feeding Infants and Young Children," by Edmund Cautley, M.D. Cantab. London: J. & A. Churchill. 1897.

"Juvenile Offenders," by William Douglas Morrison. London: T. Fisher Unwin. 1896.

"Die Syphilis im Kindesalter," von Dr. O. Heubner. Handbuch der

Kinderkrankheiten herausgegeben von Dr. C. Gerhardt. Nachtrag I. Tübingen. 1896.

"Der Keuchhusten. Der Bostock'sche Sommerkatarrh (das sogenannte

heufieber)," von Dr. Georg Sticker, Wien. 1896.

"Diphtheria and Antitoxin," by Nestor Tirard, M.D. London: Longmans, Green & Co. 1897.

"Clinical Observations upon the Use of Antitoxin in Diphtheria," by

Joseph E. Winters. New York. 1896.

"Transactions of the British Orthopædic Society." Vol. I. Sessions 1894-95. Birmingham: Published by the Society. 1896.

"Septic Conditions of the Infantile Alimentary Canal and their Treatment," by F. W. Forbes Ross, M.D. London: The Rebman Publishing Co., Limited. 1897.

"On Ringworm: an Inquiry into the Pleurality of its Fungi, by T. Colcott Fox, M.B. (Lond.), and Frank R. Blazall, M.D. (Lond.). London: H. K. Lewis.

#### SURGERY.

#### By GRANT ANDREW, M.B., C.M.

The Treatment of Enlarged Prostate.—So much has been written of late on the different methods of treating the enlargement of the prostate coincident with advanced age (20 per cent of all prostates over 60 years of age give rise to some obstruction—Messer) that it might be profitable to review the most important contributions on this subject. Before doing so we might refer in a word to the normal structure of the prostate.

Structure.—The gland capsule is distinct from that derived from the deep perineal fascia. Its substance is partly glandular and partly muscular. The muscular tissue constitutes the proper stroma of the prostate, and has a definite arrangement—viz., (a) a dense layer beneath the capsule; (b) a layer of circular fibres around the prostatic urethra; (c) strong bands between these two layers which decussate freely, forming meshes in which the glandular structure is embedded.

The glandular substance is composed of numerous follicular pouches opening into elongated canals which join to form the excretory ducts (Grav's Anatomy.

Its vascular and nervous supply is quite distinct from that of the testicle, except that both glands (testicle and prostate) are supplied by the sympathetic. Morbid Anatomy.—Two opinions from recent writings might be quoted

with reference to the structural change of the prostate when so hypertrophied. Griffiths (Journal of Anatomy and Physiology, 1890, vol. xxiv), states :-

"1. That enlargement or hypertrophy of the prostate gland results from a growth of the gland tubules with their associated muscle (stroma), so as to form new gland substance closely resembling that of normal gland. This constitutes the first or glandular stage.

"2. That after a variable time degenerative changes set in which ultimately convert the new tissue into a mass of more or less dense fibrous tissue containing only atrophied remains of glandular and muscular elements,

constitutes the second or fibrous stage."

Ciechanowski (Centralb. für Chir., No. 32, 1896) believes the hypertrophy is not a homoplastic new growth, but the result of a chronic inflammatory process affecting sometimes the glandular portion, at other times the stroma, but most frequently both of these elements. The occurrence of prostatic enlargement—which is not an invariable result of this inflammation—depends on the intensity of the process and, above all, on the parts of the gland most affected. The more the glandular portion is involved, the greater is the tendency to enlargement of the prostate gland.

Methods of Treatment.—Castration.—The publication by White, of Philadelphia, in 1893, of his results in the treatment of enlarged prostate by castration excited considerable interest at the time, and has done much since to bring this subject under greater notice. In additional articles (Annals of Surgery, July, 1895, September, 1896, and January, 1897), White states that the theoretical objections urged against double castration have been fully negatived by clinical experience, which shows that rapid atrophy of the enlarged prostate follows the operation in a large proportion of cases—about 87-2 per cent—and that disappearance or considerable diminution of long-standing cystitis occurs in about half the number of cases thus treated. Out of 111 tabulated cases (July, 1895), 18 were fatal. White would exclude 13 of the fatal cases on the ground that these were operated upon when the kidneys were in a state of disorganisation from backward pressure (vide Cabot's criticism, Annals of Surgery, September, 1896).

Comparing this operation (castration) with other operative procedures, White concludes that, apart from sentimental objections, castration offers a better prospect of permanent success than any other treatment, and on these grounds—(1) smaller mortality as compared with prostatectomy; (2) absence of any permanent fistule, perineal or suprapubic; (3) ease and quickness with which it can be performed; (4) the possibility of avoiding anesthetics, which, in

these cases, are in themselves dangerous.

Other Opinions on Castration.—Bruns (Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie, Bd. i, Hft. 1)—"There can be no doubt that castration is followed not only by reduced vascularity, but also by shrinking and fibroid degeneration of the glandular tissue . . . Those who have suffered from chronic retention, which has necessitated for many months and even years the habitual use of the catheter, may be relieved after castration from the necessity of thus emptying the bladder. In about one third of such cases, such improvement follows the operation that the catheter can be used less and less frequently and with greater ease. . . Double castration, though an easy operation and in itself free from any immediate danger, is open to serious objection even in patients of advanced age. Cases have been recorded in which it has been followed by nervous depression and mental apathy. . . At present the most certain method of treating prostatic hypertrophy, especially in the earlier stages of the disease, is double castration."

Hurry Fenwick (British Medical Journal, 1895, p. 579).—"There is no doubt that slow shrinkage of the prostatic tissue in many of the forms of senile enlarged prostate ensues upon double castration. Further experience must, however, decide as to whether every form of prostatic growth is thus affected. It is certain that escape from catheter life after castration depends absolutely on the health of the vesical muscle. . . . To promise a confirmed catheter case that orchectomy will do away with the instrument will merely bring discredit on the operation and disappoint the patient."

Among other references, mostly, however, reporting a single case or a small group of cases, are the following:—Rorsing (Centralb. für Chir., No. 2, 1896; Lendon (Australasian Med. Gazette, 20th September, 1895); Kummell, Berl. Klinik., August, 1895; Lütken, Deut. Med. Woch., 31st January, 1895).

Unitateral Castration.—The evidence in support of the removal of only one testicle has been very meagre and contradictory. A priori one would expect

atrophy of the corresponding lobe of the prostate.

Ligature and Division of Vas Deferens.—Almost as much has been written in support of this operation as has been written on castration itself. The general feeling is that although atrophy of the prostate results, it only does so after disorganisation of the testis has occurred. The advantage of this operation over castration has been questioned by many, and notably by Cabot (Annals of Surgery, September, 1896). This author collects seventy-six cases of division and ligature of the vas, and concludes that this operation has no advantage over castration in point of mortality, while it is less satisfactory in obtaining relief.

Other Opinions.—Nové-Toperand (Lyon Méd., October, 1896) regards this operation as suitable in what he terms the middle period of prostatism, where the cystitis, hæmaturia, and complete or incomplete retention are the result of congestion. It is useless, he thinks, in advanced cases, where structural

changes have taken place in the gland, though it may relieve pain.

Pavone (Il Policinico, No. 15, 1896, E. B. M. J.) cites 34 cases where the vas deferens was excised. Four died of other diseases; in 2 the results were negative; the remaining 28 were either cured or improved. This author believes that when good results do not follow it is because the vas deferens was not completely obliterated. He therefore advises torsion of the vas after its division. See also Lauenstein (Centralb. für Chir., No. 7, 1896).

Prostatectomy.—This, the older method of dealing with such cases, has still its supporters. In a critical article by Cabot, of Boston (ibid.), an attempt is made to prove that the results of prostatectomy equal, if they do not improve upon, those of castration. He bases his conclusions on an analysis of

forty-two cases. His conclusions are briefly as follows:-

In the matter of mortality the operation of prostatectomy has a slight

advantage over castration.

Prostatectomy has the further advantage that it allows of a thorough examination of the bladder and of the discovery and correction of other conditions not before suspected. Stones are frequently removed in this way without adding to the gravity of the operation. . . .

Prostatectomy has its especial field in the treatment of obstructive projections which act in a valvular way to close the urethra. There is, however, no form of prostatic obstruction which a skilful operator may not correct by

prostatectomy.

Prostatectomy is applicable to more cases than castration, and is especially to be selected when an inflamed condition of the bladder makes drainage

desirable

These conclusions are criticised by White in the Annals of Surgery for

September, 1896, and January, 1897.

Other Opinions.—J. B. Bryson (Philadelphia Med. News, 29th June, 1895) reports having performed this operation in 27 cases by the supra-pubic method. Eliminating 3 cases which died, 1 of hæmorrhage in sarcoma and prostate and 2 of pyelonephrosis, he places the mortality at 16 6 per cent. In 13 a radical cure was effected.

13 a radical cure was effected.

Eugene Fuller, of New York (ibid.), reports six cases. The supra-pubic operation was performed. Prostate was enucleated. He has had no trouble

from hæmorrhage.

Cauterisation.—Comparatively few references can be found bearing on this

method of treatment.

Negretto (Rif. Med., 20th and 22nd January, 1896) records a favourable result. The patient, et. 66, had enormous enlargement of the lateral lobes, some enlargement of the median lobe, and all the symptoms of advanced prostatic disease. The rectum was dilated and packed with iodoform gauze. The prostatic lobes were then fixed with a blunt hook, and cauterised with Paquelin's thermo-cautery. The gauze was left in situ, and a No. 18 Nélaton's catheter fixed permanently. The catheter was kept in until the seventh day, and on the ninth day was removed permanently. Three and a half months afterwards the right and middle lobes were found atrophied, and the left half of the original size. Patient was able to work the whole day, and to pass water freely without disturbance.

The same writer (in Gazz. degli. Osped., 27th December, 1896) records other four cases. The method used is same as above noted. The patients were respectively 56, 62, 74, 78, and had suffered from prostatic disease from three to five years on an average. In each case cauterisation per rectum not only speedily relieved congestion but caused a notable diminution in size of the prostate. The author believes this method to be superior, both in its immediate and in its remote effects, to castration or excision of the vas deferens.

Electrolysis or Application of Electricity.—Vautrin (Archives d'Electricité

Médicale, 15th June, 1896) believes electrolysation in early stages of enlarged prostate to be very valuable, and holds that it stimulates the dormant activity of the smooth muscular fibres.

Minervini (Rif. Med., 11th April, 1896) writes in a somewhat similar strain. He uses a modified Apostoli's method, passing one electrode into rectum and the other into urethra. His results are favourable.

### DISEASES OF THE EYE.

By FREELAND FERGUS, M.D.

Irregular Astigmatism due to the Use of the Microscope.

—In a recent number of Knapp's Archiv attention has been called by Dr. Ellis to the fact that prolonged use of one eye while the other is kept shut is apt to produce an irregular astigmatism. This has been noticed by him and by others in connection with microscopical work, and it seems not unlikely that it may occur with any instrument in the use of which one eye is kept tightly closed and the other alone is used for observation. He believes that the condition is to be attributed to cicatricial changes produced in the cornea from lid pressure, which changes may become permanent. As a preventive he advises that all engaged in such prolonged effort should simply exclude one eye from the act of vision by means of a shade and not by closing the eyelids.

New Operation for Cicatricial Ectropion.—Dr. Hotz treats this troublesome affection of the upper lid by a most reasonable method. He first liberates the cicatrix much in the usual method, but takes care in doing so to make a large and somewhat circular incision which extends right up to the eyebrow. The upper margin of the cicatricial skin which he thus liberates he attaches by several points of suture to the upper margin of the tarsus. On this he lays special stress, for if it is thoroughly done it entirely prevents the lid being again drawn up by the contraction of the tissues. The part left bare above the tarsus he covers either with a skin flap cut from the neighbourhood or by Thiersch's grafts. He finds that cicatricial skin does as well for transplantation as healthy skin.

Catarrhal Ophthalmia.—In an interesting article in Knapp's Archiv, Dr. Gifford points out that one form of scute conjunctivitis is due to the pneumococcus of Fränkel. His experiments seem to leave no room for doubt. Every now and again epidemics of acute catarrhal ophthalmia break out, and some of these at any rate seem to be due to this cause. Other micro-organisms produce the same effects, notably the one described by Weeks. Gifford found that the best remedy to employ in such cases is zinc chloride (1 gr. to 1 oz.)

Case of Paralysis of Convergence without Impairment of Associated Movements.—This is an extremely interesting case published by Dr. Hague. The movements of the eyes were for the most part perfect. Thus, either of the internal recti muscles acted quite naturally so long as it was in association with the corresponding external rectus muscle.

The Sphenoidal Cavity and its relation to the Eye. By C. R. Holms (Knapp's Archiv).—This is an exceedingly important paper, and calls attention to a class of cases very apt to be overlooked. Unfortunately, the carefully written anatomical introduction is almost completely robbed of its value by the fact that a table which ought to have accompanied it is wanting. The cases given, however, are of considerable value.

In the first case noted the patient suffered from headaches limited to the left side, the pain being severe and radiating to the back of the neck immediately below the occiput. He never had any nausea, sickness, or vomiting, and only in the late stages did the vision become affected. Ultimately the left eye became nearly blind, and the pain became very severe. On examination it was found that the ball was extremely painful to touch, and that there was slight exophthalmos. There was a slight conjunctivitis, with engorgement of the vessels. Dioptric media clear; arteries normal, but veins engorged. Margin of disc slightly hazy.

Examination of the nose showed almost total stenosis due to deviation of

septum from old fracture.

A few days afterwards the nerve began to get pale, and it was determined to operate on the cavity. With considerable difficulty, owing to the distortion of the parts, an opening was made into the sphenoidal cavity, and at once all the distressing symptoms disappeared. The headache ceased, and there was no longer any painful retraction of the muscles of the neck.

The cavity discharged a fair amount of pus. The ultimate recovery was excellent. The retina resumed its normal functions except for a small central

scotoma.

Observations on the Retinal Blood-Stream at the time of Death. By Dr. Usher (Ophthalmic Review).—We mention this paper because, from a medico-legal point of view, it may be of some value. During life the blood in the retinal veins and arteries continues to flow in a constant current. In the arteries it flows from the disc, and in the veins towards it. Now, at death it is found that in both sets of vessels the columns get broken up into a somewhat beaded appearance, in consequence of which the current of blood can be seen. In both sets of vessels it is found to move towards the disc. The movement lasts in the veins sometimes for so long a period as three minutes.

## Books, Pamphlets, &c., Received.

Essays and Addresses, by Sir J. Russell Reynolds, Bart., F.R.S. London: Macmillan & Co., Limited. 1896. (10s.)

The Principles and Practice of Medicine, Designed for the Use of Practitioners and Students of Medicine, by William Osler, M.D. Second Edition. Edinburgh and London: Young J. Pentland. 1895.

On Deafness, Giddiness, and Noises in the Head, by Edward Woakes, M.D. Lond., assisted by Claud Woakes, M.R.C.S. Fourth Edition. London: H. K. Lewis. 1896. (10s. 6d.)

Septic Conditions of the Infantile Alimentary Canal and their Treatment, by F. W. Forbes Ross, M.D. London: The Rebman Publishing Company, Limited. 1897. (7s. 6d.)

Publishing Company, Limited. 1897. (7s. 6d.)
Refraction of the Eye, its Diagnosis, and the Correction of its
Errors, by A. Stanford Morton, M.B. Sixth Edition. London:
H. K. Lewis. 1897. (3s. 6d.)

Archives of Clinical Skiagraphy, edited by Sydney Rowland, B.A. Camb. London: The Rebman Publishing Company, Limited. No. 3, Vol. I. December, 1896. (4s.)

Dental Surgery for Medical Practitioners and Students of Medicine. by A. W. Barrett, M.B. Lond. Third Edition. London: H. K. Lewis. 1897. (3s. 6d.)

The Medical Side of the Drink Question, by Sir Benjamin Ward Richardson, M.D., F.R.S., &c., with a Biographical Note. London: The Ideal Publishing Union, Limited. 1897.

On Ringworm: an Inquiry into the Plurality of its Fungi, by T. Colcott Fox, M.B. Lond., aud Frank R. Blaxall, M.D. London:

H. K. Lewis. 1896.

Exercises in Practical Physiology, by Augustus D. Waller. London: Longmans, Green & Co. 1897. (1s. net.)

Autoscopy of the Larynx and Trachea (Direct Examinatin without Mirror), by A. Kirstein, M.D., and Max Thorner, M.D. Philadelphia: The F. A. Davis Company. 1897. (75 cents net.)

Transactions of the British Orthopædic Society. Vol. I. Published by the Society. Birmingham: Hall & 1894-95.

English.

The Journal of Balneology and Climatology, being the Journal of the British Balneological and Climatological Society, edited by Samuel Hyde, M.D. Vol. I, Part I. January, 1897. London: (2s.)John Bale & Sons.

Practical Manual of Diseases of Women and Uterine Therapeutics. by H. Macnaughton-Jones, M.D. Seventh Edition, with 565 London: Baillière, Tindall & Cox. Illustrations.

(Price 15s.)

The Menopause and its Disorders (with Chapters on Menstruation), by A. D. Leith Napier, M.D. London: The Scientific Press,

Limited. 1879. (7s. 6d. net.)

Columbia University Biological Series. IV: The Cell in Development and Inheritance, by Edmund B. Wilson, Ph.D.

York: The Macmillan Company. 1897. (14s. net.)

A Pictorial Atlas of Skin Diseases and Syphilitic Affections from the Museum of the St. Louis Hospital, Paris, edited and annotated by J. J. Pringle, M.B. Part VII. London: The Rebman Publishing Company, Limited. 1897. (10s. 6d.)

Elementary Bandaging and Surgical Dressing, by Walter Pye. F.R.C.S.; Revised, and in part Rewritten, by G. Bellingham Smith, F.R.C.S. Seventh Edition Bristol: John Wright & Co.

(2s.)

The Medical Annual and Practitioner's Index: a Work of Reference for Medical Practitioners. 1897: Fifteenth Year. Bristol: John Wright & Co. (7s. 6d. net.)

Injuries and Diseases of the Ear, by Macleod Yearsley, F.R.C.S. London: The Rebman Publishing Company, Limited. 1897.

Herbal Simples: approved for Modern Uses of Cure, by W. Fernie. M.D. Second Edition. Bristol: John Wright & Co. (6s,)

# GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 20th February, 1897.

	1	WEEK EXDING		
	Jan. 30,	Feb. 6.	Feb. 13.	Feb. 20.
Mean temperature, .	. 33.0	34.6	33·1°	45 °0°
Mean range of temperature between day and night,	. 11·5°	6·5°	10·8°	10· <b>4</b> °
Number of days on which rain fell,	. 4	2	5	3
Amount of rainfall, .	. 0.60 in.	0.32 in.	0·44 in.	0.17 in.
Deaths registered,	. 362	374	458	404
Death-rates,	. 26.3	27-2	33.3	29.4
Zymotic death-rates, .	. 3.8	4.3	4.9	6.3
Pulmonary death-rates,	. 8.7	9.5	12.9	10.2
DEATHS — Under 1 year,	. 64	87	90	101
	. 64	81	98	75
DEATHS FROM— Small-pox,				•••
Measles,	. 24	24	23	38
Scarlet fever,		<b>3</b>	3	2
Diphtheria,	.	4	3	1
Whooping-cough, .	.   19	23	27	33
Fever,	. 3	1	4	3
Diarrhœa,	. 6	4	6	10
Croup and laryngitis,	. 4	3	8	3
Bronchitis, pneumonia, and pleurisy,	d . 92	102	144	127
Cases reported— Small-pox,				
Diphtheria and membranou	. 15	19	10	9
croup,	. 21	27	21	26
Erysipelas, Scarlet fever,	51	63	66	60
Typhus fever,				
	17	16	13	14
Continued fever, .				
Puerperal fever,	. 1	1	2	2
Measles,* .	299	339	370	393

<sup>\*</sup> Measles is not notifiable.

#### THE

# GLASGOW MEDICAL JOURNAL.

No. IV. APRIL, 1897.

#### ORIGINAL ARTICLES.

# A CASE OF SUCCESSFUL REMOVAL OF A LARGE SARCOMA OF THE BRAIN.<sup>1</sup>

By EBEN. DUNCAN, M.D., Physician, Victoria Infirmary, Glasgow;

AND

A. ERNEST MAYLARD, M.B., B.S., Surgeon, Victoria Infirmary, Glasgow.

#### Dr. Duncan's Report.

J. R., warehouseman, et. 38, was seen by me first on 30th January, 1893, in consultation with Dr. Morton; he was complaining of epileptiform attacks. He stated that his illness began three years before that date. On rising from bed one morning he suddenly became unconscious, and was told, after his recovery, that he had had an attack of convulsions, which lasted about ten minutes. During the following eighteen months he had at considerable intervals four attacks of twitching of the muscles of the left side of his face. The muscles of the mouth and of the eyelid were chiefly affected. In these attacks he did not lose consciousness. They were ushered in by a feeling of a choking sensation in the throat.

<sup>&</sup>lt;sup>1</sup> The patient was shown at a meeting of the Glasgow Pathological and Clinical Society on 8th March, 1897.

The twitchings above mentioned lasted for a few minutes, and were followed by a numb sensation in the left hand and left foot. During the continuance of this numbness, which lasted for several days, he had partial loss of power in the left hand. He suffered at times from a dull aching pain over the right parietal eminence, about 41 inches above the meatus of the ear and about an inch from the vertex, in the mesial plane. Ten years before he had suffered from a chancre, which was not followed by constitutional symptoms. He was married; his wife had had two miscarriages, but no living children. recommended that he should come into the Victoria Infirmary for observation. He was admitted on 24th February, and remained for four weeks. During his residence in the Infirmary he had two attacks of Jacksonian epilepsy. attacks were on the 10th and 18th of March, and were carefully observed. They were preceded by severe headache, which was located over the right parietal bone. Before the attack, the pain extended down to the cheek, and then radiated across the middle line to the left side of the head. Just before the attack, the pain was most severely felt in the supra-orbital and occipital regions on the right side. For two hours before the twitchings began, he experienced numbness in the left arm at the elbow. The twitching began in the right lower eyelid, and extended to the left outer angle of the mouth, which was drawn upward and outward. On protruding the tongue, it was seen to deviate to the left. There was no deviation of the eyes, and no loss of consciousness at any time. The twitchings lasted about three minutes, and were followed by a feeling of "needles and pins" in the thumb of the left hand and in the left side of the tongue. The headache continued till next morning, and gradually became less severe in character. On the theory that these symptoms might be due to a syphilitic gumma pressing on the motor area, bichloride of mercury with iodide of potassium were administered; and as there was no return of the epileptiform attacks, and the headache had almost entirely disappeared, he was dismissed on the 23rd of March. and asked to continue the treatment and report his condition from time to time.

I saw him at intervals during the following six months, and pushed the antisyphilitic treatment, but the twitchings became more frequent and the headaches more severe. During the summer his eyes were examined by Dr. Freeland Fergus, who found a very slight degree of optic neuritis; but his eyesight was not impaired. There was no loss of memory, and no intellectual disturbance. His employer informed me that he

was a very intelligent and trustworthy man, and never made any mistakes in his work. He was, however, very irritable in temper. As he did not improve I advised operation, with a view to which he again entered the Victoria Infirmary.

#### MR. MAYLARD'S REPORT.

Operation, 1st November, 1893.—With the assistance of Dr. Grant Andrew and Dr. Symington the following operation

was performed:—

The fissure of Rolando was localised on the right side by Hare's method, and a semi-elliptical shaped flap of skin, 3 inches by  $2\frac{1}{2}$  inches, was turned down from the upper part. Four discs of bone were removed by the large-sized trephine, and the remaining maltese crosspiece sawn away. By this means

a quadrilateral-shaped space was exposed.

The dura mater was reflected by a crucial incision, and, in turning back the upper and anterior segment, it was found to be adherent to what, after its detachment, proved to be a pulpy-like structure. To further expose this, another circular disc was removed at the antero-superior angle, and the two lateral triangular pieces of bone sawn off. On then reflecting the dura mater, a distinct tumour, soft in consistency, was exposed, but found still to extend further forwards.

An attempt was then made to detach the posterior exposed portion, when it was found possible to insert the forefinger between the growth and the brain tissue. By gently insinuating the finger, the tumour was easily enucleated, except in the region of the dura mater above, to which it was somewhat adherent.

There was very little bleeding, but owing to the size of the cavity left it was thought advisable to gently and loosely stuff

with iodoform gauze.

The remaining portions of the dura mater were stitched together, and six out of the eight pieces of bone were replaced. The skin flap was stitched in position, except where the plug passed out.

After operation the patient vomited several times. When he regained consciousness he complained of a feeling of numbness and weakness in left upper extremity. The lower part of face on left side was paralysed.

630 P.M.—Owing to continuous oozing and much soaking

of dressings the wound was redressed.

2nd November.—Passed a quiet night; sleeping fairly well. Complains of no discomfort; sickness has stopped, and he is taking milk diet.

The left fore-arm, hand, and lower part of face markedly paretic.

3rd November.—Dressings, being much soaked with blood, were removed, and owing to the marked paresis it was thought advisable to remove the gauze stuffing. Its withdrawal was followed by free oozing of blood which "pulsed" out of the wound. A fresh plug was inserted, and the parts dressed as before.

Just before finishing the ward visit, the patient was seized with the familiar twitchings of the left fore-arm muscles, and of muscles of lower part of left half of face. These became more and more severe, until there were quite distinct clonic spasms of muscles of left arm, left leg, and left side of face. The left orbicularis palpebrarum kept contracting rhythmically, the left angle of mouth was drawn up in the same way; these spasms passed off in a little, but the biceps continued in clonic spasm longer, accompanied by clonic spasm of the muscles of the thigh.

At this stage the dressings were removed and the gauze plug withdrawn; no ozing followed its withdrawal; no reinsertion of the plug. A brief reappearance of spasms occurred of arm and leg, but these finally disappeared. Consciousness was

retained throughout.

5th November.—A slight seizure of twitchings, lasting about five minutes, occurred in afternoon. On dressing the head the brain substance was found slightly bulging from the wound.

9th November.—Since last note there has been one brief attack of spasms; no further protrusion of brain substance. A perforated zinc plate was applied over wound in order to exert gentle pressure over protruding brain substance.

13th November.—No recurrence of spasms. The skin flap has united except at two small points. Through these apertures

there is some purulent discharge.

16th November.—Discharge has considerably increased, and it was found necessary to remove one of the replaced fragments of bone.

21st November.—It has been found necessary to extract the

remaining pieces of bone.

25th November.—Continues well in every respect; no sign of fits; sleeps well, and takes his food well. There is, however, marked hernial protrusion of brain substance. This was shaved off. There is some rigidity of left leg and arm.

27th November.—Left arm is completely paralysed; there is

also inequality between the two sides of the face.

16th December.—Since last note, patient has been out of

bed and feeling comparatively well; the wound, however, continues to discharge freely, and on more than one occasion considerable masses of hernial protrusion have been removed. Efforts have been made by pressure and the use of strapping to prevent the protrusion, but without avail. The left arm is maintained in a flexed position, and shows signs of becoming rigid.

Second Operation.—With the object of covering the hernial opening a plastic operation was performed. An oblong shaped flap was dissected up from in front, having its base below. This was displaced backwards and secured to the freshened edges of the skin around the hernia. Another V-shaped piece was also dissected up in front of the above, and displaced back

in order to relax it.

26th January, 1894.—Since the plastic operation on the 16th ult., there has been no further projection or loss of brain substance; the skin flap healed in position, and patient left the hospital with the wound practically healed.

20th June.—Patient walked up to hospital to-day to report himself. He had just come from the country, and was looking exceedingly well. The left arm and hand are paralysed and

atrophied. He has had no fits of any kind.

March, 1897.—His present condition may be described as follows:—He enjoys perfect health. He eats and sleeps well, is mentally acute, and attends to all his own business, which is that of a hardware merchant. His fore-arm and hand are rigid and paralysed; his left facial muscles are paretic; his left foot is paralysed; he can, however, walk perfectly well.

He states that for a whole year he was perfectly free from fits, but since that time he thinks he has had about twenty; they have, however, been pretty equally distributed over that period, showing no tendency to become more frequent latterly. These fits are ushered in by a sharp pain, momentarily felt, in the arm between the shoulder and the elbow. With one exception they occurred at night time, and consisted in nothing more than the loss of consciousness for half a minute or so. In the exceptional instance he was standing in front of his dressing table, when, after the customary arm aura, he was prevented from falling by his wife, who was standing close by.

Pathologist's Report on the Tumour (Dr.T. K. Monro).—"The tumour weighs 3 oz.; it is oval in form, measuring 3 inches by 2½ inches, and flattened; at the surface, where it was in contact with the bone, it is rough and irregular, but the rest of its surface is covered by a membrane, not unlike the normal soft membranes in appearance. The consistence is firmer than

that of cerebral substance. On section, the tumour substance is found to cut easily and to be considerably firmer than brain substance. The capsule is strong. The cut surface has a somewhat translucent appearance, like boiled sago, only not so granular. There are evidences of hæmorrhage in the tumour tissue.

"Microscope.—The tumour is a sarcoma with rather large round cells, a considerable number of which, however, are somewhat elongated in one diameter, and therefore appear oval in shape."

Remarks by Mr. Maylard.—In selecting the place for trephining, we were guided more by the convulsive twitchings of the left upper extremity than by the pain and tenderness complained of by the patient. As it turned out, however, these latter would have proved the better indication of the seat of the tumour. The motor area must have been secondarily implicated; that is to say, the stimulation of the arm centres must have been produced by the backward pressure of the growth.

It is not possible to say from what particular intra-cranial structure the tumour grew. Its most adherent part was that next to the skull, but this might equally mean that the tumour in its growth had commenced to invade the membranes and the bone.

After the removal of the tumour, and seeing there was so little hæmorrhage, I regret that I was induced to stuff the cavity. This, I fear, was the cause of the bone discs dying and eventually allowing the brain substance to protrude. Had I closed the wound completely, or inserted a small drain, it is possible this unfortunate sequence might have been avoided. As it is, the amount of brain substance which was lost has been the cause of the contracture and paralysis of the fore-arm and the weakness on the left side of the face and the left foot. The slight fits from which the patient has suffered from time to time I think may be explained by the cerebral cicatrix resulting from hernia. I hardly think they can be attributed to any recurrence of the tumour, for there is no indication of their increasing in frequency, and, considering the nature of the growth, one might reasonably expect that a marked return would have taken place before the termination of a period of three years and four months.

CASE OF CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR ON BOTH SIDES, PROVING FATAL **EXTENSION** BYON THE LEFT THROUGH THE LABYRINTH AND AUDITORY AND FACIAL NERVES TO THE INTERIOR OF THE CRANIUM—WITH OBSERVATIONS.1

> BY THOMAS BARR, M.D., Lecturer on Diseases of the Ear, Glasgow University.

History.—The case was that of a lad, 17 years of age, a farmer's son, who had suffered for seven years from purulent disease in both middle ears. It is worthy of note that his father has suffered from a purulent disease in one ear for many years; also, that a sister suffered in the same way. It is a significant fact that she died a few months previously from what was said to be inflammation of the membranes of the brain of two weeks' duration.

My patient first came under observation in 1894, when the discharge was very profuse and feetid, having in each ear its source apparently in the attic and antrum, escaping through a perforation in Shrapnell's membrane. I treated him according to the ordinary methods (which included the use of the attic syringe) for a few months; post-nasal growths were also removed by operation. Little effect, however, was produced on the purulent process. I then proposed to operate by exposing and clearing out the antrum and attic on the left side—this being apparently the one more seriously involved. Unfortunately, the parents decided to postpone the operation, and the lad returned to his home, which was in a distant part of the country. I did not again see him for two years, but in the middle of September last he was brought to me by his mother on account of intense pain in the left ear as well as over the same side of the head. The discharge from both ears was still profuse, and its odour continued to be very offensive, notwithstanding the practice of regular antiseptic cleansing while at home. In the left ear the hearing was practically gone; in the right, a watch, heard ordinarily 70 inches from the ear, was perceived at a distance of only 10 inches. He also complained of buzzing in the left ear, with occasional giddiness, but these were not prominent features.

Operative Treatment.—The left external auditory canal was

<sup>&</sup>lt;sup>1</sup> Brought before the Glasgow Pathological and Clinical Society on 8th February, 1897.

now found to be plugged with a pretty firm polypus which evidently obstructed the discharge. Being a very sensitive patient, this was removed under chloroform, when a carious condition of the posterior wall of the meatus was revealed. While the pain was diminished by the removal of the growth, he still continued to complain of shooting pains along the back and side of the head. He had likewise chilly sensations—"a creeping cold," as he expressed it—over the surface of the body. With the sanction of the parents, I now proceeded to operate on the antrum and attic with the bur and gouge, removing also the greater part of the posterior osseous wall of the external canal. The antrum was occupied by cario-necrotic débris, granulation tissue and cholesteatomata, which were thoroughly removed. After antiseptic irrigation and drying, the cavities were freely dusted with a powder of iodoform and boracic acid, and stuffed with iodoform gauze. Excellent results seemed to follow; the pain and other symptoms disappeared, and in a few weeks he was out of doors, and the question of operating upon the other ear was being considered. He now began, however, to complain of slight headache, never severe, both in the frontal and occipital regions, with a temperature of 100°, and he was put to bed. In consequence of these symptoms, I arranged to explore the seat of operation on the following day under an anæsthetic, but he became suddenly ill during the night with violent sickness and vomiting, delirious excitement, and a temperature of 102°. With such symptoms of intra-cranial mischief, I asked the co-operation of my friend, Dr. James H. Nicoll, who freely exposed the sigmoid sinus over a large part of its course, and also the dura mater lining the outer part of the floor of the middle fossa, but in neither situation was there found any purulent collection or any other sign of disease. After the operation there was left-sided facial paralysis; this was somewhat perplexing, as the region of the Fallopian canal had not been interfered with, the seat of operation being further back. The only explanation seemed to be that the gauze stuffing had pressed upon the nerve at the back part of the tympanic cavity, which was probably at this time denuded of its bony covering. Before opening the cerebellum or temporo-sphenoidal lobe it was decided to wait for further development of symptoms, especially in view of the fact that both ears were involved in the purulent process, and that it was just possible that the seat of the mischief might be on the opposide side of the brain. His friends, also, one of whom was a respected member of the profession, were averse to further operation.

After this, his condition seemed to improve, the temperature became normal, and he looked much better.

Ophthalmoscopic Examination.—At this time Dr. Ernest Thomson kindly made an ophthalmoscopic examination, and furnished me with the following notes:—

On first inspection the left eye appears to be rotated somewhat upwards relatively to the right, and the movements of the eyeballs show some inco-ordination. There is paresis of the left orbicularis muscle, associated with a similar state of the left facial muscles. The pupils appear equal, and respond to light. In the right eye the optic disc is perhaps slightly hyperæmic, the edge of the disc is not blurred, and there is no appreciable prominence. Fundus appears otherwise normal. In the left eye, the optic disc is very hyperæmic; the physiological cup is obliterated, the upper and lower edges are obscured, the disc is distinctly prominent, and the immediately surrounding retina somewhat edematous; that is, there is optic neuritis. There is diplopia, which is chiefly marked in the middle line, and especially upwards to the It is much less marked in the left region of the field of fixation. The diplopia consists of a lateral and a vertical element. The results of the examination of the positions of the double images are conflicting, and it seems probable that there is a combination of paresis and spasm (as indicated by the nystagmus) of certain muscles or groups of muscles which renders an exact statement of the condition of the nerves difficult if not impossible.

I do not think there is any localising symptom at present derivable from the above examination of the eyes. More particularly, I do not think these symptoms point specially to the cerebellum. Taken by themselves, I am inclined to think they point to meningitis at the base of the brain, though at what part or parts I do not think there is at present evidence to show.

Mode of Death.—In about a week afterwards the patient became all at once gravely worse; there were now delirium, unconsciousness, extremely rapid pulse, a temperature of 104°, going on to 106°, and he died within eight hours of the supervention of these symptoms.

Condition of Left Temporal Bone.—The left temporal bone showed in a somewhat remarkable way how septic infection may pass from the tympanic cavity and mastoid antrum through the labyrinthine spaces and auditory and facial nerves to the cerebellar cavity; and it also illustrated the more recent methods of opening the middle and posterior fossæ of the

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cranium from the middle ear spaces, which were also opened by operation. On the outer aspect of the bone were several cavities, some of them of very considerable size—these were made by operation. The largest, about an inch long and half an inch broad, exposed the sigmoid sinus and neighbouring part of the dura mater in the posterior fossa. Above and in front of this another wide opening exposed the dura mater over the floor and outer wall of the middle fossa of the skull. These two openings were made with the chisel and gouge in the hands of Dr. James H. Nicoll. A third opening, leading into the antrum, was seen lower down and immediately behind the external canal of the ear. This was made by myself with the bur and gouge in order to clear out the antrum. The greater portion of the posterior wall of the external canal had also been removed by operation, while part of the tympanic wall of the labyrinth was found to be destroyed by caries. In the upper part of the membrane there was a large perforation; of the ossicula only the malleus remained. Pathologically, the most remarkable feature was the existence of a large cavity, lined by a soft membrane, occupying the petrous part, and continuous with the antrum this was the result of necrotic destruction of the whole of the labyrinth. The only trace of the labyrinth found in this cavity was a small loose sequestrum consisting of a portion of the cochlea. In the roof of the cavity, corresponding with the position of the cochlea, there was a carious opening, penetrating the bony floor of the middle cranial fossa. but covered by healthy dura mater. The cribriform lamina had been eroded away, the auditory nerve presenting here an abrupt and ragged ending. The stem of the nerve was much thickened, especially just where it had been cut through at the entrance to the internal auditory meatus. The condition of the facial nerve was also of much interest. In the internal auditory meatus it was inextricably united with the auditory nerve, evidently sharing in the swelling and the thickening of the latter. At its knee-shaped bend—the geniculate ganglion —where it is joined by the large and small superficial petrosal nerves, it was denuded of its bony covering by the caries already referred to in the floor of the middle fossa, and was there directly under the dura mater, while at the posterior part of the inner wall of the tympanum the nerve was found to have been destroyed.

Condition of the Interior of the Cranium.—A post-mortem examination of the head was made on the day after death. The bones of the skull were seen to be remarkably thin at

certain parts so as to be transparent to light. With the exception of slightly increased turgidity of the vessels, the dura mater seemed normal. In the meshes of the pia-arachnoid, on the convexity of the cerebrum, there was extensive fibrinous exudation, and on removing the encephalon from the cranial cavity the base of the brain showed similar layers of fibrinous At the posterior part of the pons and the anterior part of the medulla, both on the left side, the exudation was particularly marked, so as to entangle in these situations the sixth nerve, the facial and the auditory branches of the seventh, the glosso-pharyngeal, and the pneumo-gastric. At the hinder parts of the cerebellar hemispheres, the lymph exudation appeared in little elevated masses. The cerebellum, where it was overlapped by the facial, auditory, and glosso-pharyngeal nerves, at the anterior part of the lateral lobe, just as it lies in contact with the posterior surface of the pars petrosa, was superficially ulcerated, and pus, having a feetid odour, although not in large quantity, was seen to extend mesially and deeply into the cerebellar tissue. The lateral and the fourth ventricles were occupied by a considerable quantity of clear fluid.

The dura mater, where it lined the middle and posterior fossæ, seemed healthy even where it covered the carious aper-

ture already referred to.

Observations.—There are in this case several points of

interest worthy of special notice:—

1. It is worthy of note that in this temporal bone there was no sign of disease in the bone forming the groove for the sigmoid sinus, nor in the roof of the middle ear. Evading these favourite pathways of infection the disease penetrated, probably from both the antrum and tympanum, into the labyrinth, destroying the structures contained therein, leaving nothing but the capsule. Afterwards, breaking down the perforated plate of bone through which the nerve enters the labyrinth, the pathogenic organisms travelled along the auditory and facial nerves, infecting first the cerebellum and then the soft membranes of the brain.

2. This is probably a much more common pathway of infection than is usually considered, and in a practical point of view it is very important to determine, in a given case, if this is really the pathway of infection, because such knowledge would throw light upon the nature and situation of the brain lesion. In order to determine this we must not omit the careful examination of the tympanic wall of the labyrinth with the eye assisted by the probe, so as to discover, if possible,

whether the bone here is broken down with caries. We should, also, when operating upon the antrum, examine closely the state of the posterior part of the labyrinth. If in either or both of these directions the labyrinth is found to be involved in the disease, the probability is that we have to deal with an intra-cranial lesion under the tentorium, in connection with the anterior part of the cerebellum, in the neighbourhood of the internal auditory meatus.

3. If, in operating on the middle ear for the cure of chronic purulent mischief, we find septic communication with the cavity of the labyrinth, we must not, in the light of the present case, he sitate to follow up the disease into the interior of the labyrinth and deal with it thoroughly and antiseptically.

4. While in this case the situation and character of the suppuration in the cerebellum were such as to preclude operative treatment, it is to be hoped that surgery may yet find a way of reaching brain suppuration in the neighbourhood of the internal auditory meatus. So far, cerebellar suppuration in that situation, if limited in extent, is comparatively inaccessible, contrasting unfavourably with the more common situation for cerebellar abscess—viz., near to, and in connection with, the sigmoid sinus.

5. În regard to the history and clinical features of this case, there was first the long-continued purulent disease in the middle ear which had baffled all ordinary treatment; then the obstruction in the external auditory canal caused by the polypus, associated with the symptoms which called for the opening of the cavities of the middle ear, when probably the septic mischief had already reached the cerebellum. Afterwards appeared the symptoms which led to the operation for exposing the sigmoid sinus and dura mater on the floor of the middle cranial fossa, these symptoms being probably coincident with the onset of lepto-meningitis; and, finally, the violent phenomena, probably due to effusion into the ventricles, which preceded death by a few hours.

6. The absence of giddiness in a marked form is an interesting fact, in view of the destruction of the labyrinth. This, however, coincides with a case which I showed to the Society a few years ago, where the whole labyrinth was removed as a

sequestrum without giddiness at any time.

7. The comparative slightness of pain in the head was also an unusual feature in the presence of cerebellar suppuration and lepto-meningitis.

8. The difficulties in connection with this case were increased by the fact that the septic mischief existed in both ears, and

in both it was of that serious form usually associated with

perforation of Shrapnell's membrane.

9. The issue of the case emphasises the importance of operating upon the antrum without delay, after a fair trial has been given to ordinary methods of treatment. It would have been well if the operation on the mastoid antrum had

been performed two years previously.

10. The normal condition of the dura mater covering the carious opening at the roof of the labyrinth is worthy of note. That the dura mater presents an important obstacle to the infection of the cranial contents has been often pointed out. It has evidently a strong resisting power against the attacks of pathogenic organisms, and to this is no doubt mainly due the fact that so many persons suffer for long periods of time from purulent disease of the middle ear without serious consequences.

## INTURATION AND TRACHEOTOMY IN DIPHTHERIA

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In diphtheria there is a twofold menace to life. There is the disease itself, and there is the liability to the respiration becoming obstructed from the presence of membrane in the air passages.

Respiratory obstruction may form the only element in the

immediate gravity of a case.

Obstruction producing signs of asphyxiation may result from a limited deposit of membrane confined for the most part to the larynx, or from a more extensive deposit of membrane extending into the trachea or bronchi.

If the obstruction is limited to the larynx, the respiratory distress will disappear on restoring the patency of the larynx

by the insertion of an intubation tube.

In the case of a more extensive deposit of membrane, if intubation affords any relief, it will effect this by eliminating the dyspnœa which arises from that part of the obstruction which is laryngeal. This relief may be permanent or it may be temporary only, the issue being rendered doubtful by the risks attaching to the exfoliation and the expulsion of the membrane. In the majority of such cases, however, the

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respiratory obstruction will be more directly reached by tracheotomy, and a more secure basis of relief established.

In short, if the obstruction is tracheal, tubage of the trachea is indicated; if the obstruction is laryngeal, tubage of the

larynx is indicated.

Further, respiratory obstruction in diphtheria, demanding operative interference, may arise from spasm of the glottis, and, if one may judge from the disparity, frequently brought to light by post-mortem examination, between the paucity i of mechanical obstruction and the distressing dyspnœic symptoms in life, this may be a more general cause than is commonly supposed.

In some cases spasm of the glottis may form the whole obstacle to free respiration. In most cases, supplementing the mechanical obstruction caused by the membrane, it may be just sufficient to determine the breakdown of an aëration which previously had been satisfactorily accomplished by

increased respiratory efforts.

Urgent dyspnceic symptoms may therefore arise in diphtheria from an obstruction that may be regarded as inorganic, and comparable to the similar conditions met with, say, in spasmodic stricture of the urethra or cesophagus; and just as these spasmodic conditions yield to the administration of chloroform or the passing of an instrument, so it is occasionally observed, in cases which are being anæsthetised for tracheotomy, that an improvement in the breathing follows the administration of chloroform; and, again, cases are not infrequent in which intubation having being performed on account of the urgency of the symptoms, the immediate expulsion of the tube has been followed by such relief of the dyspncea as to make its reinstation unnecessary.

From the fact that diphtheria is now accepted as a specific infectious disease, characterised by a local fibrinous exudation, and by constitutional symptoms due to toxins produced at the site of the lesion, it might be inferred that urgent dyspnœic symptoms, arising from an extensive deposit of membrane in the respiratory tract, would be accompanied by a marked degree of systemic infection, and that where the obstruction was due to a limited deposit of membrane there would be little or no appreciable constitutional disturbance. But cases occur in which, with an extensive deposit of membrane, there is little constitutional disturbance; while, on the other hand, there may be profound toxemia with little membrane to account for it, or, according to some writers, an entire absence

<sup>1</sup> Œdema may explain this in a few cases.

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of membrane. Still, as a general rule, in diphtheria it may be accepted that the systemic infection is in proportion to the extent of the membranous exudation.

The cases, therefore, of respiratory distress, which were theoretically classified according as the obstruction was laryngeal or tracheal, and were operatively discriminated as requiring intubation or tracheotomy, may now be recognised clinically, in most cases, by the absence or presence of marked systemic infection.

If a case requiring operative relief in diphtheria suffer from severe prostration, and there is also present the cachectic pallor characteristic of toxic poisoning, then, in the majority of such cases, if tracheotomy is performed, the operation will be found justified ultimately by the expulsion of membrane from the trachea.

Cases, however, exhibiting the same degree of dyspnœic urgency may occur, which stand out in direct contrast to the above. The face and lips are livid, but the lividity is that of a healthy child suffocating, and, in place of the asthenia, a full strong pulse will be recognised between the intervals of inspiration. It is in such cases that intubation finds its place. After intubation, the healthy colouring of the face is restored, and the breathing becomes so quiet and natural that, but for the thread of the intubation tube looped round the ear and fixed to the side of the face, there is little to distinguish such a case from an ordinary mild case in an adjacent cot. To have performed tracheotomy primarily in such instances would be as unsurgeonlike as to proceed to relieve a distended bladder by operation before having attempted to pass a catheter.

There are cases, however, which do not bear so plainly written on their face the indications either for intubation or for tracheotomy. The dusky pallor is present and the general prostration, but it is impossible to judge whether these have arisen from an exhausting struggle against carbonic acid poisoning simply, or are the result of such a struggle plus the depression due to toxic poisoning. Practically, it matters little what is the true condition. It is sufficient to have a doubt. A distinguished French physician has said of the bath treatment in enteric fever that "Le bain reconnaît less siens," and the same might be said of intubation. Prepare, therefore, for tracheotomy, but attempt to avoid it by intubation. If intubation fails to relieve the respiratory distress, or if it makes the condition worse, there can be little hesitation in proceeding at once with tracheotomy. If the respiratory

distress is completely relieved, and the case thereafter proceeds to a successful issue, there remains the satisfaction of having avoided the extreme operation. If the difficulty of breathing is only partly relieved, but relieved to the extent of placing the patient out of immediate danger, then the remaining dyspnœa, or dyspnœa that may develop after an interval of complete relief, may be interpreted as pointing to the possible necessity of tracheotomy. The employment of intubation in such cases is an unavoidable encroachment within the sphere of tracheotomy, and this must be practically acknowledged by having everything in readiness for the major operation.

It is, of course, implied in the foregoing that the symptoms which determine recourse to intubation are those which determine recourse to tracheotomy—viz., increasing signs of asphyxiation. If the symptoms fall short of this, it would be unwise to perform intubation, as in many cases there might follow on removal of the tube a dyspnœa which would prove

more serious than the primary dyspnæa (vide infra).

There are instances, however, where dyspnœa, short of producing signs of asphyxiation, may be justifiably dealt with by intubation. I refer to cases of infants, and to cases of extreme prostration, where the system can ill afford to bear the additional strain of the muscular exertion involved in a moderate dyspnœa. As the majority of such cases succumb within a brief period, the after-effects of intubation do not count for so much. And there is always the negative merit attaching to the operation of having rendered less distressing the child's egress from life.

In effect, then, the cases of dyspnœa which require assistance

in diphtheria may be operatively classified as follows:-

I. Intubation: (a) ordinary cases; (b) "spasmodic" cases; (c) moderate dyspnæa in infants or in cases of extreme prostration.

II. Intubation followed by "subsequent" tracheotomy. III. Intubation followed by "immediate" tracheotomy.

IV. Primary tracheotomy. (See Appendix.)

As the operation of intubation will be found fully described in recent text-books on surgery or diphtheria, it will be

unnecessary here to enter into details.

The preliminaries of the operation are much the same as in tracheotomy. The child is immobilised by being wrapped up in a blanket, and the operation is then conducted with the same antiseptic precautions as in tracheotomy. The urgency which necessitates the operation does not usually admit of the

aseptic cleansing of the mouth before operation, and therefore great care has to be taken to guard the end of the intubation tube from contact with the mucous membrane of the mouth while it is passed along the guiding finger. The operation is most easily performed with the child sitting up, the head being so adjusted that the axis of the buccal cavity forms nearly a right angle with that of the larynx. Owing, however, to the struggles of the child, the tube is usually inserted with

the head in any position but the right one.

The gag must be light, self-retaining, and of such a shape as will least impede the movements of the guiding hand. In infants or in young children in which the incisors only are present a gag may be dispensed with, and intubation may be performed, without undue difficulty, with the patient recumbent. If, however, a gag is used, the child must be placed in an upright position, as the presence of the gag tends to aggravate the respiratory distress. A desideratum at present is an improved finger shield which would enable the operator to deal in the recumbent position with cases in which the exhaustion is so great that sitting up is attended with risk.<sup>1</sup>

The various steps of the operation are usually described as consisting of (1) introduction of left forefinger as guide;

(2) insertion of the tube; (3) extraction of the tube.

Introduction of the Left Forefinger as Guide.—This is the cardinal step of the operation. First of all the aperture of the larynx must be recognised, and recognised in no uncertain way. Pushing the left forefinger over the dorsum of the tongue, in the middle line, the epiglottis is first encountered and is easily recognised. The finger is then swerved to the right, into the angle formed by the epiglottis and the aryteno-epiglottic fold, and the tip of the forefinger is thereafter brought to rest on the arytenoid cartilages behind. The laryngeal aperture is thus not only recognised, but recognised in its relation to the pharynx. Care must be taken not to obstruct the opening of the larynx with the finger.

Insertion of the Tube.—Having located with precision the laryngeal aperture, and keeping the tip of the left forefinger resting on the arytenoid cartilages, so as to prevent the tube passing into the pharynx, all that remains to do is to convey the tube to the end of the guiding finger. Except that the same delicacy of touch should be employed which characterises catheterisation in general, it is unnecessary to lay down any rule to guide the movement of the right hand, which conveys

 $<sup>^{\</sup>rm 1}$  The rubber finger-guard of T. Mark Hovell at present best fulfils this purpose.

the introducer and tube; for, as the end of the tube glides from the pulp of the left forefinger into the opening of the larynx, the right hand will elevate involuntarily in the middle line. As the tube advances into the larynx the left forefinger is used to press it well home, and at the same time the introducer is withdrawn. The gag is now slipped, and the loop of thread which is attached to the tube is passed round the ear and then made fast to the face with plaster.

At the end of the operation, the operator should be in a position to declare with absolute confidence that the tube has been deposited in the larynx; for cases may occur where intubation fails to relieve the respiratory distress, and in such cases, if there is no dubiety as to the location of the tube, tracheotomy may be proceeded with at once. If any doubt exists, the larynx or upper part of the trachea should be compressed between the thumb and forefinger, when the presence of the tube will be indicated by an abnormal feeling of hardness and resistance.

Extraction of the Tube.—This is accomplished by means of the loop of thread attached to the tube. A bone spatula, having a notch at the distal end, is used for depressing the tongue, and is held in such a way that by passing the thread over the notch the tube may be gently levered out in the axis of the larynx. Objections have been raised to the retention of the thread after the tube has been inserted and its removal has been advised; but the removal of the thread confronts us with the difficulty of having to withdraw the tube by means of an extractor—a somewhat delicate operation at the best even in the hands of experienced operators, and one which might unnerve the inexperienced in cases of extreme urgency, as when a child is suffocating from an obstructed tube. In fact, this difficulty (and it is one which is not altogether removed by the retention of the thread, as the latter may be bitten through) has given rise to one of the strongest arguments against intubation.

M. Bayeux, of the Children's Hospital, Paris, an ardent advocate of intubation, conceived the idea of surmounting this objection by the construction of a tube which might be removed by external digital compression of the trachea. He experimented with several varieties of intubation tubes, and finally selected that of O'Dwyer as the most perfect. This instrument of O'Dwyer he then set about improving.

Considering the various reasons given by O'Dwyer for the

¹ I have not found any inconvenience arise from the presence of the thread, further than that it necessitates the child's hands being confined. No undue difficulty was experienced in feeding the patients.

plan of his tube, he took exception to those adduced for the

subventricular part, and proved experimentally that this part of the instrument had several disadvantages (Fig. 1). The subventricular part he removed from O'Dwyer's tube, leaving a short olive-shaped tube, which, when in position, extends only to the second or third tracheal rings (Fig. 2). Employing this modified form of tube for intubation, M. Bayeux found that it could be ejected from the larynx, like a "stone from a cherry," by gently compressing the trachea just beneath the cricoid. To effect this, pressure is applied by the thumb of the right hand, the left hand being employed to flex the head simultaneously, so that the

Fig. 1. tube may pass forward into the mouth and not

into the pharynx.

It is about two years ago since I first saw this method employed, and in response to a recent inquiry as to how far the short tubes were now recognised in Paris, M. Collin replies, "Les tubes longs ne nous sont jamais demandés maintenant."

Tentative Removal of Tube.—After intubation, there remains the question as to the time that should elapse before an experimental removal of the tube is attempted. Authorities differ on this point. Some say four days, some say five days, and others again from five to seven days, according to the severity and character of the disease. From instances, however, that have occurred, in which the tube has been accidentally expelled within twelve to fifteen hours after its introduction, and it has not been found necessary to reinstate it, a rigid rule in regard to time cannot be laid down.

In general, as in tracheotomy, the tube should be dispensed with as soon as possible. In cases which exhibit no appreciable constitutional disturbance after the relief of the respiratory distress, removal of the tube might be essayed within twenty-four hours; or, varying with the nature of the symptoms, within forty-eight hours; and in all cases extubation

should be attempted after three days.

Permanent Removal of Tube.—In Treves' System of Surgery, Mr. Pitts, the writer of the article upon diseases of the larynx, in his remarks on diphtheria, refers to the difficulty of dispensing with the tube after tracheotomy, and quotes Mr. T. Smith to the effect that, owing to impairment or complete loss of function of the muscles of the larynx, a considerable time may elapse before breathing through the larynx is re-established.

If this impairment of function is not infrequently found after tracheotomy, an aggravation of the same might be anticipated in the case of intubation, where, with the same functional abeyance, there are the mechanical effects likely to result from the direct pressure of the tube.

As a matter of fact, extubation is usually followed by suffocative symptoms, and only exceptionally is it possible to

dispense with the tube on its first removal.

The dyspnæa which succeeds extubation is unusually treacherous and uncertain. It may begin immediately after the removal of the tube, or not for many hours after its removal, when the quiet and natural breathing of the patient has thrown you completely off your guard.

In such cases one is struck with the rapidity with which asphyxiation may ensue. In fact, a child from whom an intubation tube has been removed requires constant surveillance, and this demands on the part of the resident physician no little self-sacrifice, social and otherwise, so that he may be on the spot with the minimum delay should occasion arise.

This temporary restriction on his liberties he will not grudge if, after a few days, it is found possible to dispense finally with the tube; but as weeks pass by without bringing to an end these constantly recurring dyspnæic alarms, he feels sorely tempted to release himself from all further trouble and anxiety, by performing a surreptitious tracheotomy.

It is this capricious recurrence of post-extubation dyspncea that precludes intubation, in the writer's opinion, from general practice, combined with the fact that constant medical supervision is necessary even when the tube is *in situ*, as the latter

may be coughed out or become obstructed.

The dyspnæa referred to may, in some cases, no doubt, be due directly to ulceration or ædema resulting from the pressure of the tube, but in other cases cannot be accounted for in this way. I had, for example, a case of a child who, for about seven days after the final removal of the tube, was seized with an attack of difficult breathing if I ventured near its cot or made a playful grimace to it from a distance.

The dyspnœa here was purely nervous, and was not so bad as to require assistance, but if it had been, I believe that the spasm would have been overcome and relief afforded by the simple reintroduction of the intubation tube, followed by its immediate removal.

It will be unnecessary to discuss in detail the objections which have been raised against intubation, as these are so amply set forth in books on the subject.

Foremost amongst them is the risk of ulceration, which is

especially to be feared in cases in which the vitality of the tissues of the larynx or trachea has been unduly impaired, as in cases of double infection, in unhealthy debilitated children, or from the severity of the disease itself.

It has been recently urged that the serum treatment of diphtheria has greatly minimised the risks of ulceration, owing to its dissipating the membrane so quickly,<sup>2</sup> and so rendering it

possible to dispense with the tube sooner.

While admitting the validity of this claim, it should be borne in mind that the permanent removal of the tube is dependent, not so much on the disappearance of the membrane, as on the spasmodic vagaries of the larynx above referred to.

The only question that remains for consideration, is as to the relative merits of intubation and tracheotomy in the

treatment of respiratory obstruction in diphtheria.

Hitherto the medical world has been divided into two hostile camps—one pressing the claims of intubation, and the other defending the time-worn laurels of tracheotomy. This is unfortunate, as it leads to a most erroneous conception of the true relation between the two.

Intubation and tracheotomy are not to be regarded as

independent and rival operations.

Intubation is embraced, as it were, in the circle of tracheotomy. It can never supersede the latter; frequently, when tried, it has to make way for tracheotomy, but used with discrimination, in many cases (in the writer's experience in about 50 per cent of the cases), it may obviate the major operation.

Intubation is especially to be recommended in infantile cases, where, indeed, it might be advisable to use it indiscriminately, so great in such cases is the risk of broncho-

pneumonia arising from tracheotomy.

Statistics show that in the case of infants under two years,

<sup>1</sup> More especially scarlet fever.

Observations as to the behaviour of membranes after the injection of antitoxic serum are only of limited value unless accompanied by a statement as to the previous tendency of the membrane to increase, remain stationary, or disappear. In hospital work, it is only rarely that one is afforded the opportunity of observing the behaviour of the membrane before antitoxin is administered. In the few cases that came under the writer's notice, where the special tendency of the membrane to increase was placed beyond doubt by two or three days' observations, the serum arrested the activity of the membrane and determined its disappearance. But the membrane did not disappear with the lightning rapidity observed by some authorities. It did not disappear any more quickly than may be seen any day in an ordinary "mild" case throwing off the membrane. What antitoxin did was to reduce these cases to the level of mild cases.

the use of intubation has effected a reduction in the rate of

mortality of about 12 per cent.

Intubation has the further general recommendation that it requires a very brief apprenticeship.

#### APPENDIX.

#### I. INTUBATIONS.

## (a) ORDINARY CASES.

		Interval	Time T	ube			ANTI	TOXIN.
Саве.	Age.	between Admission and first Intubation.	remaine Larynx a the vari Introduct	ifter ous	Interval between Intubations.	Character of Breathing between the intervals of Intubation.	No. of Injections.	Total Amount.
1	Yrs. ly	Hours. 9½	1. 15 2. 64	м. 0 30 30	Nos. H. M 1, 2. 3 5 2, 3. 2 4	Quiet for 3 hrs. Difficult immediately after removal of	1	c.c. 20
2	21	1	1. 25	40		tube.	2	55
3	$2\frac{1}{2}$	6 <u>1</u>	1. 31 2. 71	20 0	1, 2. 5 3	Quiet for 1 hr. and 20 mins.	2	60
			3. 17 4. 47	30 30	2, 3. 3 0 3, 4. 0 5	Quiet for 2 hrs. Difficult immediately after removal of tube.		
			5. 14	40	4, 5. 8 4	Quiet for 4 hrs. and 40 mins.		
			6. 16	30	5, 6. 36 0	Sudden difficulty after 33 hrs. 30 mins. of easy breathing.		
		,	7. 8	50	6, 7. 34 4			1
4	11/2	91/2	1. 10	0	Not replace	l. Breathing quiet.	3	40
5	5	21/2	1. 7 2. 31	45 30	1, 2. "2 3	Moderately difficult after tube was removed.	2	50
		00		0	2, 3. 1 1			
6	4	30		15 25	1, 2. 2 1	Quiet for a short time, then diffi- cult.	1	20

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#### REMARKS ON PRECEDING TARGE.

## In none of these cases was membrane expelled.

CASE 1. Breathing continued difficult at intervals for seven days after final removal of tube;

CASE 1. Breathing continued diments at intervals for seven days after final removal of tube; voice clear three weeks after; dyspnœa, cyanosis, membrane, &c.

CASE 2. Urgent dyspnœa with lividity; completely relieved on intubating; died twenty-five hours after with signs of broncho-pneumonia; no visible membrane; no sectio allowed.

CASE 3. Breathing, easy after final removal of tube, was a little noisy for about two days after; voice husky for about three weeks; membrane present, a fresh deposit of membrane was noticed on tonsils two days after admission.

s noticed on tonsils two days arter admission.

CASE 4. Urgent dyspnæa, &c.; child slipped its hands and removed tube; breathing

continued quiet.

Case 5. Breathing quiet and easy after final removal of tube; voice husky for six days after; membrane present, disappeared quite; fresh membrane seen sixteen days after admission.

Case 6. Tube was replaced, but was dislodged seven hours after, during a fit of coughing; dyspnosa set in after four hours quiet and easy breathing. In my unavoidable absence a colleague was sent for, who immediately performed tracheotomy.

## (b) "SPASMODIC" CASES.

	CASE. AGE.	Interval between	Antitoxin.		
CARE.		Admission and Intubation.	No. of Injections,	Total Amount.	
1	7½ years.	5 hours.	1	20 c.c.	
2	14 ,,	8 <u>1</u> ,,	1	20 ,,	
3	1 ,,	9 ,,	1	20 ,,	

#### REMARKS.

CASE 1. Urgent dyspnoa with lividity; membrane present on tonsils; temporary arrest of breathing while attempting to insert the end of the tube past the glottls; collapsed; breathing restored after one or two movements of artificial respiration, afterwards continued quiet and natural; no membrane expelled, no coughing.

CASE 2. Dyspnoa with lividity; tube inserted, but immediately expelled; breathing much improved; no membrane expelled; not necessary to reinstate tube.

CASE 3. The dyspneic symptoms, which otherwise during the day would not have demanded immediate relief, were considered too serious to leave child overnight unassisted; intubation performed; tube immediately expelled; breathing considerably relieved; no membrane expelled.

#### (c) MODERATE DYSPNŒA IN INFANTS AND IN CASES OF GRAVE PROSTRATION.

		Interval between	Antitoxin.		
CASE.	Ags.	Admission and Intubation.	No. of Injections.	Total Amount.	
1	1 1 years.	l hour.	1	30 c.c.	
2	,, 19 ,,	3 hours.	1	15 ,,	
3	1 <sub>1</sub> ,	l hour.			

#### REMARDS ON PRECEDING TABLE.

CASE 1. Grave prostration; dyspnœa completely relieved by intubation; child died peacefully twenty-one and a half hours after; no sectio allowed.

CASE 2. Laboured and exhausting breathing relieved completely by intubation; child died peacefully forty-two and a half hours after. Post-mortem.—No membrane found; bronchopneumonia; slight ulceration of cords on either side; no ulceration in trachea.

CASE 3. Semi-moribund on admission; dyspnœa only partly relieved by intubation; tube expelled, not reinserted; died nine hours after; no sectio allowed.

## II. INTUBATION FOLLOWED BY "SUBSEQUENT" TRACHEOTOMY.

		Interval between	Антитохии.		
CAFE.	AGE.	Admission and Intubation.	No. of Injections.	Total Amount.	
1	l's years.	16 hours 20 minutes.	1	20 c.c.	
2	2 ,,	3½ hours.	1	20 ,,	

#### REMARKS.

Case 1. Owing to tube becoming frequently displaced, with the return of the urgency of the symptoms, tracheotomy was performed; no membrane was expelled from the traches after the operation.

Case 2. Return of suffocative signs three hours after intubating; tube found displaced and lying in pharynx; tube replaced, but five and a half hours after was found again in pharynx; tracheotomy performed; no membrane was expelled from traches after operation.

## III. INTUBATION FOLLOWED BY "IMMEDIATE" TACHEOTOMY.

Case. Age.		Interval between	Antiroxia.		
	Admission and Intubation.	No. of Injections.	Total Amount.		
1	11 months.	13 days 22 hours.	1	20 c.e.	
2	6 ,,	21 hours 50 minutes.	1	20 ,,	
3	6 years.	8 days 21 hours.	1	22 ,,	
4	2 ,,	1 hour.	1	20 ,,	

#### REMARKS.

Case 1. Numerous patches of membrane visible on tonsils, pharynx, &c.; diagnosis confirmed hacteriologically; sudden onset of difficult breathing about fourteen days after admission; breathing, which was laboured on admission, had heretofore for the most part been quiet; involutation performed; breathing made worse; tube withdrawn; tracheotomy; died. Postmortem.—A No. 12 1-inch screw nail was found encapsuled obliquely behind and at side of right posterior border of larynx, the point implinging on the first and second rings of traches, and deflecting the traches from the middle line; no membrane in air-passages.

CASE 2. Urgent dyspnoic symptoms, &c.; intubation performed; a cast of membrane expelled during the attempt; respiratory distress unrelieved; tracheotomy; died seven hours after : no sectio allowed.

CASE 3. Sudden onset of dyspnosa; intubated; breathing unrelieved; tracheotomy; casts of membrane expelled from traches after operation.

CASE 4. Laboured breathing, with commencing cyanosis; no visible membrane; intubation performed; breathing made much worse; tracheotomy; struck a deep-seated localised abscess while operating, which had been pressing on the traches and obstructing the breathing.

#### IV. PRIMARY TRACHEOTOMY.

This operation was performed in 10 cases, and in 8 of these membrane was found in the trachea. In the remaining 2 cases, since no membrane was ever expelled from the tracheal wound, it is reasonable to infer that if intubation had been performed in the first instance, tracheotomy might have been avoided.

## CLINICAL ESSAYS ON INSANITY

By JOHN T. MACLACHLAN, M.D., Dumbarton, Late Senior Assistant, Hartwood Asylum, Lanarkshire.

#### III.

EPILEPTIC INSANITY (THE DEMONSTRATIVE MANNER OF EPILEPTICS) AND PUERPERAL INSANITY.

EPILEPTIC insanity is typically represented by quiet periods of mental life, suddenly broken by passing mental storms, the latter frequently casting their shadows before them. Many epileptics go on for days and weeks and even months, as quiet, agreeable, and industrious patients, when some day their mental reflexes begin to get more acute, as shown by an irritable, disagreeable, and fidgety manner, to be quickly followed with one or more convulsive seizures. The explosion may be vented in a motor convulsion—the common way—or escape by other channels, e.g., it may be a sudden homicidal blind fury or fit of temper, with noisy threatening speech, with angry saliva gathering in the mouth, or it may be a pure mental disturbance (choked fit) in which the patient experiences considerable mental anguish from pent-up nervous energy, and is restless, distressed, and sheds tears of misery, wringing the hands, perhaps, in despair. The writer has observed that a great many epileptic lunatics are characterised by a demonstrative manner. They seem to have all their reflexes abnormally acute, and their muscles are often stammering like their tongues. Many epileptic lunatics in ordinary conversation gesticulate a great deal, often displaying tragic

attitudes, especially with their right hand, and not a few of the male epileptics keeping poking one in the ribs, as if to drive "their point" home, and they seem unconscious of these awkward habits. Again, in quiet discourse, many epileptic lunatics become fidgety and restless, jumping to their feet

and apparently lacking in ordinary self-control.

A strained form of religious sentiment is quite a feature of insane epileptics. The knee-jerks are frequently highly exaggerated, but not always. Then, epileptics are often revengeful and vindictive, and require the greatest tact and care in dealing with them. Their habits are often gluttonous, but generally they are tidy in their person. There is a great deal of vaso-motor disturbance in epilepsy. The pupils dilate readily under slight stimuli of excitement. Large quantities of clear pale urine are often passed by such patients, and they frequently rise out of bed during the night to unload their bladders. The etiology is obscure. It is a disease affecting a neurotic stock chiefly. A history of tapeworm in childhood is not uncommon. The writer knows of a boy who suffered from epileptic fits from his seventh to his eleventh year, when they suddenly left him; but, unfortunately, at the age of 21, they returned.

In the way of treatment, all sources of peripheral irritation should be sought out and combated. There is generally an instability of the nervous system in epilepsy, an abnormally easily put out condition of all the mental functions, and it is clear that the treatment should be sedative, tonic, and calcu-

lated to make a vigorous organism.

## PUERPERAL INSANITY.

Puerperal insanity occurs generally within a week after pregnancy, and seems to attack youngish women chiefly. There may or may not have been septic infection, but it is doubtful whether this is invariably the case. It is a definite illness, runs a definite course, and with good nursing and general bodily treatment nearly every patient affected ought to make a satisfactory recovery. The mental symptoms depend upon the bodily conditions, and may safely be neglected, and all therapeutic resources be concentrated on rectifying body-conditions—the mind recovers when the body is put right.

The illness is ushered in by an alteration in the manner of the patient. She becomes "queer," restless, and sleepless. The

temperature generally rises a few degrees, but not always. All the sense-organs become preternaturally acute; slight noises jar and upset the patient, hence the absolute necessity for quietness and seclusion for these patients. No talking friends should be allowed to see the patient until she is convalescent. The doctor and the nurse alone should see or speak to the patient.

The majority of the patients become maniacal, but their maniacal excitement has a melancholic complexion. There are generally hallucinations of hearing and sight present, the patient hearing the voices of friends or strange sounds of all kinds; she may see beasts, or the devil alluring her to destruction. Generally, the delusions have a religious aspect, and commonly relate to religious shortcomings and soulperdition, and the patient is generally in great agony of mind, perhaps shouting, "Oh! my God! what have I done?" or perhaps dwelling on imaginary wrongs done to her husband. The maternal instincts are early impaired and lost. patient very frequently attempts to kill her child by strangulation or in other ways. Flashes of light are commonly seen before the eyes.

In typical cases, there is great agony and distraction of The pupils are usually dilated, but all their reflexes may be normal. The appetite for food is lost, the patient suffering too much mental pain to heed food or anything else. There is generally an expression of great terror on the face, which is, as a rule, pale, the eyes being full and staring. great excitement of the patient may have to be met by the use of a padded room or extra nurses, or hyoscine and sulphonal or other hypnotics may be required during the earlier stages to procure sleep. As a rule, the patient will drink liquid food, and the stomach tube is seldom requisite for feeding them.

When the mental agitation subsides, it is succeeded by a state of depression and apathy, the patient minding little about friends or life itself. At this stage, there is well-marked morbid introspection noticeable on the part of the patient, and, as a rule, they are quiet and slow in unfolding their minds to to the doctor.

They have now recovered their senses, and express a strange antipathy to their relatives, particularly the husband. They now lie in bed quiet and exhausted. Even at this stage the excitement of a visit from friends may completely upset them and retard their progress. When the stage of reactive depression begins to pass away, an emotional weakness is commonly observed, the patient shedding tears at trifling provocations.

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The higher faculties of the mind—the reasoning and will power—are the last to be restored.

When recovery takes place, the patients seem to remember very little of what happened during the acute stage of the

disease.

In regard to body symptoms, there is generally a febrile temperature lasting about three weeks, the temperature curve exhibiting great oscillations. Occasionally the temperature may reach 106° F., and cold sponging and antifebrin be necessary along with stimulants. Slight causes disturb the temperature, even after it is normal. Excitement of visits from friends and constipation may send it up three or four degrees. The quantity of urine passed in twenty-four hours is markedly diminished. I have seen it amounting to nothing more than 7, 8, 10, or 12 oz. daily, and that may be the state of matters for many days, and yet there has been no dropsical condition present. I have observed a slight trace of albumen in the urine in the acute stage of the disease in the cases that have come under my observation. The lochial discharge is often of foul smell, and may be scanty or absent altogether. Great bouts of sweating is a common symptom, particularly during the night. The pulse is feeble and quick. A few bronchitic râles at the back of the lungs are not uncommon.

The treatment essentially required is rest and seclusion, good nursing, plenty of light and pure air in the sick-chamber, good nourishing foods—milk, beef-tea, switched eggs, &c. regulation of bowels by castor oil or enemata; sulphonal for sleep. Hypodermic injections of hyoscine is of great value if maniacal symptoms be prominent. Cold sponging and antifebrin for high temperature, with vaginal injections of weak carbolic lotions, and occasionally an intra-uterine injection of same if circumstances demand it. Stimulants, at times, also may be required. I administered an intra-uterine injection of carbolic lotion (1 to 40) to one patient whose lochial discharge was foul, and the temperature 106° F. There was a great gush of blood came away, preceded by some old clots. second injection, given a week afterwards, was not followed by any untoward symptoms. The state of the uterus and vagina requires attention as much and more than the mind in these patients. The mental symptoms are undoubtedly the expression of altered bodily conditions.

During convalescence, light employments, gentle exercise in

These facts have led me to believe that the dropsy in tubal nephritis is probably due to the loss of albumen rather than to the diminished excretory flow.

the open air, plenty of strong foods—beef, eggs, fish, &c.—with tonics—iron, arsenic, strychnine, and quinine—are about all the remedies likely to be required to make the recovery of the patient a satisfactory one. The patients should be supervised for a period of two to three months, and occasionally longer.

# CURRENT TOPICS.

THE REBUILDING OF THE GLASGOW ROYAL INFIRMARY.— Perhaps the most absorbing medical topic of local interest at present is that of the reconstruction of the Royal Infirmary as a memorial of the sixty years of Her Majesty's reign. the appropriateness of Lord Provost Richmond's proposal to commemorate in this manner the long reign of Queen Victoria there exists a very general agreement among the citizens of Glasgow. There is, however, considerable difference of opinion as to the manner in which the proposal should be carried out. On the part of many there is a feeling that no attempt should be made to reconstruct the Royal Infirmary on its present site, and no doubt a good deal can be said in favour of this view. Two main objections have been urged to the present site: first, it is not a healthy site; second, there is not sufficient space for modern requirements. With regard to the first of these objections, we cannot help thinking that the site is probably as healthy as any that could be found within a mile of the Infirmary. As regards the second, there is perhaps more to be urged in its favour. Still, we have been informed that the hospital stands within an area of nearly five acres of ground belonging to the Infirmary, and with carefully-prepared plans it is possible, we think, to erect a very efficient hospital on the old site. As to the convenience of Cathedral Square as a central spot for the reception both of surgical and medical cases there can be little doubt, and we feel sure that the Committee entrusted with the carrying out of the details of the Lord Provost's scheme will give due consideration and effect to all reasonable suggestions. If the City of Glasgow goes on increasing in area and in population as it has been doing of recent years, we cannot help thinking that at no very distant date the citizens will be called upon to erect a fourth general infirmary, and this seems to us to be another reason for keeping, if possible and practicable, the Glasgow Royal Infirmary on the ground it has occupied so nobly for the last hundred years. We have, however, a very strong feeling that an attempt should be made to rebuild the whole Infirmary and not merely the medical house.

Congratulations to Lord Lister.—The Glasgow Medico-Chirurgical Society, at one of its recent meetings, resolved, on the motion of Professor Joseph Coats, to send a letter of congratulation to Lord Lister upon the occasion of his nomination to the peerage. In accordance with this resolution the following letter has been addressed to Lord Lister:—

"FACULTY HALL,
"242 St. VINCENT STREET, GLASGOW,

"To LORD LISTER, P.R.S.

"My Lord,—It is the desire of the Council and members of the Glasgow Medico-Chirurgical Society to offer to your Lordship their congratulations on the receipt of the honour which has recently been conferred upon you in recognition of your distinguished scientific position and of your valuable contributions to the sum of human welfare.

"The Society recalls with much satisfaction that it has the honour to claim you as one of its members, and that its historical associations include some of the earliest records of the work which has placed your Lordship's name high on the roll of fame, and the issue of which is universally acclaimed as a great and practical benediction to mankind.

"In the name and on behalf of the Glasgow Medico-Chirurgical Society, we have the honour to subscribe our-

selves, your Lordship's most obedient servants,

"W. L. Reid, President, "C. O. Hawthorne, Secretary.

"14th February, 1897."

In reply the following has been received:—

"11 PARK CRESCENT, PORTLAND PLACE, "18th February, 1897.

"MY DEAR DR. REID,—I beg you to convey to the Council and members of the Medico-Chirurgical Society my warm thanks for their most kind congratulations.—Believe me, very sincerely yours,

"LISTER"
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TESTIMONIAL TO DR. JOHN PEARSON MUNRO.—Dr. John Pearson Munro, who, in consequence of ill-health, was compelled to resign his appointments as Lecturer on Chemistry in the Western Medical School, and Lecturer on Public Health in Anderson's College Medical School, has been presented by his friends and former pupils with a purse of sovereigns (£60), as an expression of their appreciation of his work and of their goodwill. Dr. C. O. Hawthorne acted as secretary and treasurer of the fund. We are glad to hear that Dr. Munro has made considerable progress towards recovery.

To Medical Students of the Fifth Year.—In view of the new regulation obtaining in medicine, the Barony Parish Council, on appointing two clinical clerks at Woodilee Asylum, Lenzie, have decided to make the appointments open not only to graduates in medicine but also to fourth and fifth year students, provided always that such students have taken out classes in practical pathology. The clinical clerks will be boarded in the Asylum, and will be provided with railway season tickets between Glasgow and Lenzie, to allow of their attendance, if they desire it, on special classes in Glasgow. The appointments are to be for six months, three months on the male and female sides alternately. In special cases a three months' appointment may be made.

## MEETINGS OF SOCIETIES.

## GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING VII.—22nd January, 1897.

The President, Dr. W. L. Reid, in the Chair.

#### I.—FRESH SPECIMENS.

Dr. LINDSAY STEVEN showed the parts from a case of ruptured abdominal aneurysm. The aneurysm had arisen from the posterior aspect of the aorta, and had ruptured into the tissue behind the peritoneum.

Dr. H. E. Jones showed a number of specimens of urine from a case of paroxysmal hæmoglobinuria. The specimens illustrated the rapidity with which, even after a severe attack, the blood-colouring matter may completely disappear from the urine, whilst at the same time albuminuria persists. Other features of interest were the fact that the patient was of the female sex, and that characteristic attacks of the condition had recurred at intervals for many years.

II.—FOUR CASES OF MUSCULAR ATROPHY.

By Dr. John Lindsay Steven and Dr. T. K. Monro.

The four cases of muscular atrophy, which we desire to demonstrate to-night, are of interest from several points of view. It is unusual in general medical wards to have so many cases of this kind under treatment at the same time. With regard to diagnosis, the cases raise interesting questions as to classification and pathology. On the whole, it may be admitted that the first two to be shown are examples of the usual form of progressive muscular atrophy associated with degenerative changes in the anterior cornua of the spinal cord. With regard to the last two, however, there is room for doubt as to whether they are to be regarded as of spinal origin. On the whole, the features they present seem rather to point to a primary affection of the muscles themselves. All of them have been subjected, for lengthened periods, to treatment by the hypodermic injection of strychnine; and although two of the patients have expressed themselves as being distinctly benefited both in general health and muscular power, it may be doubted whether actual improvement or arrest of the disease has taken place.

CASE I. Spinal Muscular Atrophy involving the Right Hand.—Robert M., æt. 42, labourer in a finishing shop, noticed wasting in the first interosseous space of his right hand about the end of August, 1896, and felt weakness in the same part two or three weeks later. He came to the Dispensary of the Royal Infirmary early in October, but got progressively worse, and was therefore admitted to the ward in the latter part of November. He was thereafter treated by daily hypodermic injections of strychnine, and in the course of two or three weeks he became aware that his hand had ceased to get worse as regards either strength or bulk.

So far as can be made out, the wasting is confined to the intrinsic muscles of the right hand. Wasting is conspicuous

in the posterior aspect of all the interesseous spaces, and is seen to a less extent in the palm and thenar eminence, the hypothenar eminence not being obviously affected. The fingers maintain to a slight, but quite distinct, degree the attitude due to the long flexors and extensors being imperfectly opposed by the interessei and lumbricales (over-extension of metacarpophalangeal with flexion of interphalangeal joints). The thumb can be opposed to the second, third, and fourth digits, but not always to the fifth. Adduction, abduction, and flexion of the thumb are preserved in considerable measure. The power of grasping is much reduced. Patient has not noticed twitchings of the muscles of the hand, but fibrillary tremors are very conspicuous in the right fore-arm and upper arm (including the deltoid region), and are occasionally to be observed also about the left shoulder and upper arm. The tendon-jerks are well marked all over the body, including the affected upper Ophthalmoscopic examination normal. Pupils medium and equal, contracting directly and consensually to light, and contracting also in convergence. There is well-marked unrest of the pupil, making it difficult to appreciate any little dilatation that may be caused by stimulating the skin of the neck.

Patient is disposed to attribute his ailment to heavy work. He had erysipelas four years ago.

CASE II. Spinal Muscular Atrophy involving the Fore-arms and Hands.—Peter P., joiner, aged 53, but in appearance much older, began to feel coldness in his right hand about fourteen months ago. Weakness set in a few weeks later. Several months afterwards, the left hand became affected, and about the same time patient began to feel his left foot or ankle weak. With regard to the hands, he noticed the loss of strength before the wasting. He does not know of any cause for his ailment. He became progressively worse until admission in December, 1896, but since then has improved a little, he thinks, under treatment by strychnine hypodermically and arsenic internally.

Weakness and wasting are manifest only in the fore-arms and hands, and are more marked on the right side. The principal muscles involved in the fore-arm are the ext. carp. radialis longior and brevior, and to a less extent the ext. com. digit., and perhaps the flex. carpi ulnaris. The supinator longus, the other flexors and the extensors of the elbow, the flexors of the digits, the flex. carp. radialis, palmaris longus, and ext.

carp. ulnaris are preserved.

So far as the hands are concerned, the muscular loss is severe. The fingers assume the claw-like attitude on account of the long flexors and extensors being no longer opposed by the interossei and lumbricales. There is practically no power of adduction or abduction of the four inner digits. The back of the thumb lies in the plane of the back of the hand, or even behind it, so that the hand resembles that of an ape (ext. sec. internod. poll., imperfectly opposed by thenar muscles). The right thumb can be slightly adducted and abducted, but cannot be opposed to any finger of the same hand. The left thumb can be moved in greater measure to and from the hand, and can be opposed to the fore and middle fingers. There is almost no flexion or extension of the right thumb, but the distal joint of the left thumb can be flexed very well.

Patient lifts the left foot higher than the right in walking. There appears to be slight wasting in the left leg, the maximum girth of the left calf (121 inches) being half an inch

less than that of the right.

The tendon-jerks are well-marked over the body generally, but are not so distinct in the right fore-arm as in the left. There is no ankle-clonus. The plantar reflex is preserved, but the superficial reflexes generally are not well marked.

Frequent fibrillary tremors are observed in both fore-arms and upper arms, and in the left thigh; and similar tremors occur, though not so continuously, in the right thigh, in both

legs below the knees, and over both scapulæ.

Electrical irritability of some of the affected muscles is greatly reduced. Thus, no response was obtained in either hand to faradism, although frequently in these examinations of the hand the long muscles of the fore-arm contracted. Some response to galvanism was obtained from the interessei, and the quality was not always normal. Thus:—Right abductor indicis—K.C.C. with 5 ma.; A.C.C. with 1 ma. Left abductor indicis—K.C.C. with 3 ma.; A.C.C. with 12 ma.

Patient is rather unsteady when he attempts to stand with

feet together and eyes shut.

The pupils are equal and somewhat small; each contracts directly and consensually to light. Ophthalmoscopic examination normal.

Nothing of importance is ascertained in connection with the patient's personal history, but a brother died with palsy of the left side, and another became insane and died in Woodilee Asylum. Patient denies having had venereal disease.

CASE III. Widely and Irregularly Spread Muscular

Atrophy, probably Myopathic (! Erb's "Juvenile" Type), with a definite Clinical History of severe crushing Injury of the Trunk.—John B., a miner, aged 28, was admitted to Ward 7 on 19th September, 1896.

About eight years ago, he got severely crushed in the pit, the arms being squeezed against the sides of the chest, and the pressure affecting the whole length of the trunk. He was unable to work, in consequence of this accident, for five or six weeks, during which time he had a general feeling of soreness, with pain in the small of the back, and a sense of weight in both shoulders. There was no pain in the back of the neck after the accident, and the doctor said that no bones were broken.

He never recovered completely from the accident; indeed, the weight on the shoulders became worse, and after he resumed his occupation the shoulders became very painful while he worked. Nearly a year elapsed after the accident before he recognised that he could not lift his arms properly. This weakness slowly increased, but, by changes in the nature of his occupation, he was able to work for his living until March, 1896.

The legs first began to give trouble four years ago, at a time when he was working constantly in water; he used to get wet up to the waist. Weakness in the lower limbs (causing great difficulty, for instance, in going up and down stairs), and violent and painful cramps in the thighs and calves, particularly on the right side, began at this time; and weakness increased up to the date of admission.

He strained his back sixteen or seventeen years ago by lifting too heavy a weight in play, but recovery seems to have been practically if not absolutely perfect. Since the crush, however, the back has not been right, and some time after the accident it began to get quite evidently weaker, until he became unable to raise himself after stooping.

With respect to the sense of weight in the shoulders, the power of the legs, and the power of the back, patient has

improved very greatly since admission.

Patient has had pain in the sacral region, near the middle line of the back, not continuous, but lasting it may be for days at a time, and then absent for days, and sometimes so severe that he could not allow the part to be touched. This began before the weakness of the legs. He has also suffered from shooting pains about the highest portions of the iliac crests. Further, he has had momentary shooting pains along the thighs down to the knees; these are rather severe, and make him fall down on his knees. He has still pains across the

"top of the hips" once in two or three days, but these are not severe. There has been no pain in the upper limb, except what has been already indicated as occurring in the shoulders. There is no ataxy on standing. Patient states that the senses of touch, temperature, and pain, have never been impaired. Smell, taste, and hearing are preserved. The stomach and bladder act normally. The bowels are somewhat costive. Influenza last year, and again in the spring of the present year, is the only illness he has had apart from the present one. It is to be noted, however, that on one or two occasions during his residence he suffered from an acute inflammation of the skin of the legs, rather suggestive of erysipelas. He has had a number of brothers and sisters, but no relative has suffered from any illness similar to his own. Alcoholic excess and venereal disease are denied.

Both fundi are normal. Pupils medium and equal. Each contracts directly and consensually to light, contracts in convergence, and dilates reflexly. There is no nystagmus, strabismus, or diplopia. The facial, masticatory, and lingual muscles act normally. The movements of the head upon the trunk are normal. The diaphragm acts normally.

When patient stands with his arms hanging by his sides, the scapula is rotated, so that the acromion process is displaced

downwards, and the lower angle inwards and upwards.

Both trapezii have disappeared, so that the form of the neck as viewed from behind is altered, the change being specially manifest when the shoulders are elevated. The rhomboids are powerful; the right rhomboideus major appears to be actually hypertrophied. The levator anguli scapulæ is well preserved on the left side, but has suffered considerably on the right side.

When patient is in the erect posture, and the upper limbs are extended horizontally, there is very little pushing power (serratus magnus) on either side. In order to push, patient inclines his body forwards, so as to get the upper limbs more into line with his trunk. When the arms are crossed in front, the lower angle of the scapula is very prominent, and a deep groove is seen behind the inner border of the bone.

The middle portion of the deltoid on either side remains strong, but the anterior and posterior parts are wasted. The part of each muscle that is preserved is very firm, and in the

case of the right perhaps hypertrophied.

The supraspinatus, infraspinatus, and apparently also the teres minor are powerful on both sides. The infraspinati are hypertrophied and firm.

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The subscapulares are probably active, since the humeri can be rotated inwards as well as outwards.

The latissimi dorsi are much impaired, but not lost. Their bulk is not appreciable to the eye, and there is very little of an axillary fold, either anterior or posterior, but patient is able to put his arms behind his back.

The pectoralis major is lost in great measure, but not absolutely. The wasting is pretty generally distributed

throughout the muscle.

When an attempt is made to lift up patient by placing the hands under the armpits, his shoulders go up to the sides of his head (weakness of latissimi and pectorales).

The teres major is weakened on either side. Very little

power remains to either triceps.

Flexion of the elbow can practically not be done against

gravity.

The supinator longus and extensor carpi radialis longior have disappeared on both sides. The wasted muscles which act on the elbow-joint are flabby.

Supination and pronation of both fore-arms are well carried out. The bulk of the fore-arms (when allowance is made for the loss of the two muscles just mentioned) and of the hands is well maintained.

Flexion of the wrists is preserved. Extension of both wrists is impaired in some degree, although the right wrist can still be extended to beyond the plane of the fore-arm, and the left still further. Lateral movements of the wrist can be carried out.

Flexion of the metacarpo-phalangeal, with extension of the interphalangeal joints (interossei and lumbricales), is preserved, but there appears to be, in the case of each hand, some weakness of the action of the long flexor on the distal phalanx. The lateral movements of the digits are impaired, though not lost.

Extension of the thumb and first two fingers is impaired, especially in the right hand.

There is slight weakness of the right extensor secundi internodii pollicis, but the left appears to be strong.

Patient is able to oppose his thumb to each of the remaining

digits of the hand.

The hands are cold and livid in winter. Patient is able to write quite well, and to feed himself. The grasping power, as ascertained by the dynamometer, is—in the right hand, 16 kilos; in the left, 12 kilos.

When patient lies on his back and raises his head, the lower part of the thorax becomes flattened anteriorly, and a groove develops under each lower costal margin (weakness of lateral abdominal muscles).

The gait has not much of a waddling character now. Patient walks with his feet sufficiently close together. Lordosis is the principal thing noticed as he walks, and this deformity becomes still more striking when he rises from sitting. He says his right foot tends to drag, so that the toes are readily caught by any obstacle, and he is apt to fall on his knees, but no high stepping is noticed as he walks.

Formerly he required to put his hands on his knees to enable him to rise from sitting, but after a fortnight's residence in

hospital this ceased to be necessary.

Abduction of the left thigh is carried out well; of the right not so well, the body swinging far over to the left. There is wasting of the left buttock, which is flattened and soft, whilst the right is firm and of normal shape. The wasting appears to be chiefly of the gluteus maximus. On the other hand, the right thigh is softer and thinner than the left.

Circumduction of the thigh is preserved on the left side,

but not so fully on the right.

Flexion of the left hip is strong; of the right not so strong. Extension of either hip is preserved, and the thighs can be crossed.

The knees can be flexed and extended.

The calf muscles, especially on the right side, are large and powerful, probably hypertrophied. The maximum girth of the right calf is 15 inches, and of the left, 14 inches. Patient easily stands on tiptoe.

The left ankle can be flexed and extended, but flexion of the ankle is almost impossible on the right side. The right

anterior tibial muscles are less bulky than the left.

The toes can be flexed and extended.

The plantar, abdominal, epigastric, and cremasteric reflexes are obtainable. The knee-jerk is greatly reduced, but has been obtained since admission by making patient lie on his back with the sole of the foot on the bed.

No fibrillary tremors have been observed.

The senses of touch, pain, and temperature are normal.

Nothing abnormal has been detected in the heart, lungs, or kidneys. The temperature has been normal or subnormal throughout, and the weight has remained nearly constant (about 9½ st.).

A scaly patch is present over the left tibia below the patella (? psoriasis). Patient suspects it was there before he was

injured.

Electrical investigations of the affected muscles (by Dr. George M'Intyre) have shown a quantitative diminution of excitability to both galvanism and faradism, but no qualitative changes.

The treatment has been by electricity, and by tonics inter-

nally, and latterly by strychnine hypodermically.

Patient is thoroughly satisfied, and so are others who have observed him, that he has distinctly improved since his admission. So far as muscular power is concerned, however, this is only in the sense that he can now do things that he could not do before; there is no evidence as yet that lost muscular tissue has been restored.

The history of the preceding accident, the pains, the isolation of the case in patient's family, and perhaps it may be added the age at which the disease commenced, might suggest the presence of some chronic lesion in the spinal cord. On the other hand, the wide-spread and irregularly distributed muscular atrophy; the weakness and wasting of the latissimi and pectorales in association with the great strength and size, amounting even to hypertrophy, of the infraspinati and calf muscles; the severity of the affection in the girdles and proximal segments of the limbs with the relative immunity of the distal portions; the quantitative diminution of electrical irritability without any qualitative change; the great diminution of the tendon reflexes; the absence of fibrillary tremors; and the normal condition of sensation (except as regards the pains described), the sphincters, eyes, and internal organs. make a tolerably accurate picture of a case in which structural changes are confined to the muscles then selves.

Whilst it is true that the different forms of muscular dystrophy run into one another, four principal types have been recognised: pseudo-hypertrophic (Duchenne), hereditary (Leyden), juvenile (Erb), and infantile (Duchenne) or facio-scapulo-humeral (Landouzy and Déjérine). The pseudo-hypertrophic and infantile forms commence, in characteristic cases, in childhood, and are associated, the former with pseudo-hypertrophy, and the latter with involvement of the face. In the case now under consideration, the face is normal, and any hypertrophy that is present appears to be true and not false, for the muscles that are specially large are also powerful. Leyden's hereditary type begins in the lower limbs and sacral region, whereas in the present case the lower limbs did not suffer till some years after the affection had invaded the upper

limbs or shoulder girdles.

Probably, therefore, this case should be regarded as belong-

ing to the "juvenile" type. The age is quite consistent with this view.

A few other points may be noticed. Pains are a rare feature of the disease. The disease is generally slowly progressive, but sometimes becomes stationary, and a certain degree of improvement, though exceptional, has been repeatedly observed. It is certainly interesting to watch the agility with which this patient, with his wasted muscles, can rise from the recumbent, sitting, or kneeling posture. It is noteworthy also that he has got over the necessity for putting his hands on his knees to enable him to rise from sitting, and, further, that this habit seems to have been acquired in adult life. Finally, it is of interest that of a number of brothers and sisters he alone suffers from this disease.

CASE IV. Pronounced Muscular Atrophy of very Limited Distribution.—Maggie L., aged 18, employed latterly in a thread work, was admitted on the 29th December, 1896, complaining of inability to raise her right arm completely. Two years ago, her mistress remarked to her that her right shoulder-blade stuck out too far; but patient dates her illness as far back only as the beginning of May, 1896, when, after carrying a heavy chest for a considerable distance, she felt pain in the affected limb from the top of the shoulder to the She is still liable to frequent soreness in the same parts. Difficulty in performing some parts of her work in the thread factory, and in doing up her back hair, has been present since about the time mentioned, and got worse up to the time The treatment has been by arsenic and bitters, of admission. and from the 5th January, 1897, by strychnine hypodermically. Patient thinks (11th February) she has been improving during the last ten days.

She is disposed to attribute her ailment to the carrying of the heavy weight, and there is nothing in her personal history to suggest any other cause. Her parents and her three brothers and five sisters are all alive and well. A brother and sister are older than she. The eldest of the family is 23, and the youngest 6. No relative has any complaint similar to that from which patient suffers.

The disease appears to be confined to a very few muscles. The right trapezius seems to be entirely absent, and the right serratus magnus has suffered considerably. Patient retains a good deal of pushing power (serratus magnus) on the right side, but when she pushes, the inner border of the right scapula projects far backwards, so as to give rise to a deep

vertical groove. There is room for a slight suspicion that when she pushes with the left hand the inner border of the left scapula projects a little further than it ought to. The sterno-mastoid, latissimus, rhomboid, levator anguli scapulæ, pectoralis, deltoid, supraspinatus, infraspinatus, teres minor, teres major, and subscapularis all act in a normal manner.

The rhomboids on the right (affected) side respond readily to a tap with the finger; those of the left side do not. No fibrillary tremors are seen. The pupils are large, and respond readily to light. Ophthalmoscopic examination reveals normal

conditions.

Dr. Alex. Robertson regarded the first two cases as undoubtedly cases of progressive muscular atrophy due to the usual degenerative changes in the anterior cornua of the spinal Concerning the other cases he would hesitate to pronounce a confident opinion without opportunity for more detailed examination. But, subject to this qualification, he was inclined to think that the girl's case was possibly to be placed in the group of cases known as neurotic atrophies, the muscular wasting being the consequence of injury to some limited strand of nerve fibres. Similarly, a superficial examination of the third case influenced his mind in the direction rather of an idiopathic myopathy than of an atrophy depending on a spinal lesion. In this connection he directed attention to the bulkiness of the calves and of the infraspinati muscles, and suggested that this might be due to pseudohypertrophic changes.

Dr. Hawthorne thought the two cases first shown were almost certainly cases of progressive muscular atrophy, though the purely unilateral distribution of the atrophy in the younger man did, in his mind, raise a certain doubt about the diagnosis. and the longer such a distribution persisted the more grave would such doubt become. He presumed that lead poisoning could be excluded, for it had been pointed out by Gowers that the toxic effects of lead sometimes exactly corresponded to the manifestations of progressive muscular atrophy. The treatment here pursued he had tried in several cases, and though he had never seen anything like brilliant results, the patients had as a rule regarded themselves as benefited. Of course, it was necessary to remember that strychnine, being a powerful tonic, improved the sense of general well-being, and also that progressive muscular atrophy did in some cases become arrested as a normal event. The pupils in both of the cases did not appear to be abnormal, and he would be glad to hear of any observations on this point, it having been remarked by Hughlings Jackson, that in cases where the atrophy was of the lower-arm type the pupil might be contracted in consequence of the lesion being at the level of the second dorsal nerve, and so having an opportunity of involving the fibres which pass through the root of that nerve on their way to supply the dilator iridis muscle. He had seen two or three cases in which the onset of a wide-spread atrophy appeared to be determined by a local injury, and thus was much interested in the suggestions made in connection with the last two cases.

Dr. T. K. Monro agreed with Dr. Robertson with regard to the fact of bulkiness of the calves and scapular muscles in the third case, but as there was no evidence of weakness of these muscles, he questioned the suggestion that this might be due to pseudo-hypertrophy. The age of the patient was certainly late for pseudo-hypertrophic paralysis, or for any other idiopathic muscular dystrophy, and there was no family history of any similar condition. The injury might possibly be the cause in some sense of that term, but if the injury had damaged the spinal cord it was very difficult to understand how its effects had been limited to the motor elements. In the girl's case he admitted he was in a state of uncertainty, and perhaps the disease was not yet sufficiently advanced in its distribution to justify an opinion in favour of its pathology as myopathic on the one hand, or spinal on the other. There was, however, something in the appearance of the face which reminded him of illustrations of the "myopathic face" described in connection with one form of idiopathic muscular atrophy. The pupils in all the cases displayed nothing abnormal.

# III.—SPECIMENS OF FACIAL NERVE FROM A CASE OF DOUBLE FACIAL PARALYSIS.

BY DR. JAMES CARSLAW AND DR. R. M. BUCHANAN.

Dr. James Carslaw and Dr. R. M. Buchanan showed microscopical specimens from the facial and auditory nerves, and from the brain, of a patient with bilateral facial paralysis who had formerly been shown to the Society by the late Dr. John H. Carslaw (see Glasgow Medical Journal, October, 1894, p. 300).

Dr. Carslaw sketched the clinical history of the case, the principal facts being that the patient had contracted syphilis, that along with the secondary manifestations nine months after the chancre he suddenly developed bilateral facial paralysis

and some bilateral nerve deafness, that two months later he had hemiplegia, and then acute gangrenous pneumonia of which he died. The post-mortem examination revealed a softening in the right corpus striatum, a lobular pneumonia with gangrene, but nothing abnormal in heart or abdominal There was no lesion in either petrous bone, but microscopic examination resulted in the discovery of numerous small hæmorrhages in and under the sheaths of both the facial and auditory nerves, and also in the substance of those nerves. There were similar hæmorrhages in the membranous cochlea, and the facial nerve was degenerated. The examination of the brain, in the softened area, revealed certain localised proliferations of cells in the external coats of the blood-vessels, and also hæmorrhages into the perivascular spaces; and the vessels of the pia mater showed similar conditions. When the patient was shown to the Society there was considerable doubt as to whether the paralysis should be regarded as "syphilitic" or as "rheumatic." The result of the microscopical examination, showing similar lesions in both facial and auditory nerves and also in the brain, probably confirms the view that these nervous complications were really syphilitic, and that "cold" had little, if anything, to do with their The interest of this case depends on the rarity of opportunities for pathological examination, for though nervous complications are not so very uncommon in the secondary stage of syphilis, they are very seldom fatal.

Dr. R. M. Buchanan said that the lesions in the central nervous system in the secondary stage of syphilis were still requiring much investigation. The pathology of such conditions, as they presented themselves in Dr. Carslaw's case, was only vaguely alluded to in the literature of the subject, and was not substantiated by any records of accurate observations. The subject was, however, attracting much attention. discussion on "The Affections of the Nervous System occurring in the Early (Secondary) Stages of Syphilis," held by the Royal Medical and Chirurgical Society in March, 1895, Mr. Jonathan Hutchison showed some illustrations of the microscopic appearances of the spinal cord in acute paraplegia, which he had taken from an account of a case published by M. Lamy, of Paris. There was no departure from the normal visible to the naked eye. "The stress of the disease had fallen on the perivascular spaces of the vessels, especially the veins." At the same meeting Dr. Mott referred to another case of paraplegia, which exhibited apparently similar conditions - "a diffuse small cell infiltration of the perivascular spaces." In Dr. Carslaw's case, lesions of a similar nature, with the addition of hæmorrhage, appear in the central nervous system (brain and membranes), whilst extensive hæmorrhage only is found in the nerves implicated (facial and auditory). In regard to the cerebral softening, one can only hazard the view that it was due to the obstruction of a vessel consequent on the perivascular changes alluded to, as there was no apparent degenerative change in the internal coat of the vessels to account for it.

Dr. Alex. Robertson had seen a case of bilateral facial paralysis due to double otitis media, but had never met with

such a condition as the result of syphilis.

Dr. Lindsay Steven remarked that the appearance of cellular collections round the vessels in the brain, as shown in one of the sections, could not be regarded as in any sense specific. Such lesions had been described by Coats, Middleton, and other observers, in many affections characterised by rapid development and associated with delirium; and in a case of hydrophobia from his own wards, at present being investigated by Dr. W. K. Hunter, similar appearances had been detected in the spinal cord.

Dr. R. M. Buchanan quite agreed with Dr. Steven's remark; in the present case the appearances described were not limited to the brain tissue, they were found also in the tissue of the

dura mater.

# IV.—CASE OF CONGENITAL HEART DISEASE, WITH LATE DEVELOPMENT OF CYANOSIS.

By Dr. W. G. Dun and Dr. Lindsay Strven.

The patient at his death was 4 years of age. Death took place suddenly, the boy becoming convulsed. At his birth he was a well-formed healthy-looking child. When 18 months old he had measles. The attack was quite an ordinary one, and no cardiac lesion was then observed. Six months later he had an attack of jaundice, apparently catarrhal. About a year before his death his mother noticed a slight blueness of the boy's face. Four months before his death, when Dr. Dun was called to see him, there was pronounced lividity of the face and ears, such as at once to suggest the likelihood of a cardiac lesion. The fingers and toes were also livid, and later the ends of the fingers were observed to be enlarged. The boy was very easily fatigued, and in walking stooped forward, with his hands fixed on his thighs. He was subject

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to paroxysmal attacks of dyspnæa, the most severe attacks

being nocturnal.

On examining the front of the chest no prominence of the precordial area was observed, nor any excessive cardiac movement. The apex beat was slightly displaced downwards and to the left. The area of cardiac dulness was increased, mainly to the right, where it extended an inch to the right of the sternal border. There was also some elevation of the upper border. On auscultation a loud systolic murmur was heard all over the cardiac area, but with most distinctness at the base to the left of the sternum. There was no thrill.

The diagnosis was stenosis of the pulmonary orifice of the heart, with probably a patent foramen ovale, or an opening in the ventricular septum. The lesions were thought to be

congenital.

Dr. Dun discussed the case, and referred particularly to two points—(1) the late occurrence of cyanosis, and (2) the

probable duration of life in such cases.

Dr. Lindsay Steven had seen the boy once, during life, in consultation with Dr. Dun, and he quite agreed with the diagnosis as formulated by him. The cyanosis was of the most typical and characteristic kind, fully justifying the use of the term "morbus caruleus." He had performed the post-mortem examination, and obtained the specimen now shown to the Society. The heart is considerably enlarged. the enlargement being almost entirely due to hypertrophy, with moderate dilatation of the right ventricle. The orifice of the pulmonary artery is very much contracted, due to coalescence of the semilunar cusps, so that it passes with difficulty a fine surgical probe. There is no deficiency of the ventricular septum, the two ventricles being entirely separated from one another. The right auricle is much dilated, and the foramen ovale is patent, but at the same time more than half closed, so that no great admixture of blood could have thus taken place. The ductus arteriosis is entirely closed, being converted into a fibrous cord, a slight depression being visible where it had opened into the aorta. From this it is clear that the lesion of the pulmonary curtains must have originated at a comparatively late period of intra-uterine From the unusually late development of the cyanosis, it is also clear that the lesion of the pulmonary valves must have been a progressive one, stenosis slowly becoming more pronounced during the first three years of life. As regards the causation of the cyanosis, the phenomena observed in this case lend support to the view advanced by Morgagni

and Peacock that the lividity is not so much due to actual admixture of oxygenated and venous blood by direct communication through imperfect septa, as to "stasis of blood in capillaries dilated by long-standing congestion, aided by imperfect aëration of the whole mass of the circulating fluid."

### MEETING VIII .- 5TH FEBRUARY, 1897.

PROFESSOR M'CALL ANDERSON, M.D., in the Chair.

# I.—PATIENT WITH ECTROPIUM AFFECTING BOTH EYES. By Dr. Ernest Thomson.

Dr. Ernest Thomson showed a patient, a female, about 60 years of age, but looking older, who suffered from ectropium of both lids of the right eye, and of the lower lid of the left eye. The right eyeball was not atrophied, and one of the most interesting features of the case, which was of many years' duration, was the behaviour of the corneal epithelium. This had been accustomed regularly to proliferate and dry into a horny scale, which after a time was shed, the patient thus regaining a fair degree of sight after a period of complete blindness.

# II.—A CASE OF A LARGE FÆCAL TUMOUR. By Dr. Middleton.

David L., 10 years old, was admitted to the Infirmary on

account of a large tumour of the abdomen.

The abdomen as a whole is not much enlarged, and, during the fortnight he has been under observation, has presented nothing like tympanitic distension. In the situation of the tumour there is marked bulging, of somewhat irregular form, and on watching this for some time at the bedside, peristaltic movements of the intestine are occasionally visible. On applying the hand to the abdomen a hard tumour is very readily felt, occupying a large part of the lower half of the abdomen, and lying, generally, rather more to the right than to the left of the middle line. It seems to rest on the pubes, but the finger can be introduced between it and the bone, and this end of it, which is extremely well defined, appears as if it

had been moulded by pressure on the bone. While the tumour is distinctly circumscribed, its upper end is somewhat less defined than its lower, owing to the former being generally overlapped by coils of intestine, which convey to the hand the impression of being loaded with pultaceous fæcal matter. measures vertically 6 inches, and transversely rather less. Its outline is somewhat irregular and nodular. It is free from tenderness; and it is only after prolonged examination that the boy complains of any pain. On grasping the tumour with the hands the displacement of air in the intestine in front of it often gives rise to a sensation somewhat similar to that conveyed to the fingers in subcutaneous emphysema, but not of such a fine character. On feeling it, the first impression is that it is absolutely of stony hardness; but on firm continuous pressure the mark of the fingers can be readily left on it. It can be moved from side to side to a slight extent, and repeated observations have also shown that it varies somewhat in position. The percussion note over the abdomen is tympanitic, except over the lower portion of the tumour, which is nearest the surface. The area of the gastric percussion note is increased, reaching well up into the thorax. The rectum is almost empty, and the tumour cannot be felt on digital

The boy has no complaint except constipation. He has no pain in the abdomen, no sickness or vomiting, and no rise of temperature; his tongue is clean and moist. The bladder is not interfered with by the pressure of the tumour. symptom is obstinate constipation, and the history bears that he has suffered from this in an aggravated form from birth. Until he was about 7 years of age he practically never had a motion without purgatives or enemata, and hard masses were frequently removed in this way, but nothing ever so large as the present tumour. About the age of 7 a complete change in his habits occurred, and for about two and a half years he generally had two or three motions every day; then constipation recurred. It is not possible to say when this tumour began to be formed, but it is probably several months ago. He was in the Western Infirmary with chorea from August to October, 1896, and while there his bowels were moved daily, or nearly so, and nothing abnormal was observed.

The facts above noted, as to the examination of the abdomen, clearly indicate the fæcal nature of the tumour, and the history confirms this diagnosis. The actual site of the tumour in the intestine is not equally evident. I believe that it is in the large intestine somewhere, the weight of the tumour being

quite sufficient to cause great displacement of the bowel. If the tumour were anywhere in the small intestine, it would, from its size, almost certainly have given rise to symptoms of

obstruction—pain, tympanites, vomiting, &c.

The treatment adopted is massage of the abdomen, and the introduction of a tube, as far up the bowel as possible, through which copious enemata are given. In this way several hard fæcal masses have been already removed, and the hope is entertained that, either the mass will then be broken up and come away in fragments, or the whole mass will be carried to the rectum, from which it can be scooped out by mechanical means.

I have brought this case before the Society, partly because of the comparative rarity of such large fæcal tumours, and partly because I think too little attention is given in our textbooks to the occurrence of fæcal accumulations. Glasgow Medical Journal for 1894, I published an account of "Three Cases of Fæcal Tumour," two of which occurred in children, and closely resembled the case before us, differing mainly in the fact that they both had great flatulent distension of the abdomen, a condition which for a considerable time masked the tumour. Both of these cases were obstinate, months being occupied in their treatment, but the ultimate result was good, as it is likely to be here. The third case belonged to a different category, and occurred in a woman, whose chief symptom was persistent vomiting. In her, there was no localised tumour, but the flat, somewhat retracted abdomen gave such a feeling of doughiness to the hand as at once suggested fæcal accumulation. Although this diagnosis was before me, and treatment was based upon it, the patient died from the absorption of some fæcal poison, the colon being loaded in its whole extent with hardened fæces. It is the only case of the kind that has come under my own observation, but, since my book was published, several medical men have written to me telling me of similar experiences of their own. I refer to it again because the occurrence of such fæcal accumulations, and their possible fatal termination, seem too little known, and mistakes such as I made are apt to recur.

Dr. Adamson referred to cases of fæcal tumour in which abdominal section had been necessary. In such cases peritoneal adhesions had been found, with considerable hypertrophy of the muscular wall of the intestine. He would be interested to know if any evidence of similar conditions existed in the present case. On the whole, he was inclined to consider

that the fæcal accumulation here was as likely to be in the small as in the large intestine.

Dr. Middleton replied that the history gave no evidence of peritonitis, and that therefore there was no reason to suspect the existence of adhesions; hypertrophy of the muscular coat of the bowel could scarcely be detected through the abdominal wall. The absence of intestinal obstruction, of constitutional disturbance, and the partial success of enemata, he regarded as supporting the view that the fæcal mass was situated in the colon. In the two other cases he had published, the tumours were removed by the repeated use of enemata, a result which could scarcely be expected in a large, firm accumulation in the small intestine, and that experience influenced his view of the present case.

### III.—RECOVERY FROM ALBUMINURIC RETINITIS.

#### By Dr. HINSHELWOOD.

Dr. Hinshelwood showed this patient, and narrated the clinical history, which commenced in the latter part of 1893. At that date the woman had an attack of nephritis, with general dropsy and uræmic phenomena. Early in 1894 her vision failed, and this was so marked that, when brought to the Infirmary, she had to be led by a friend. Examination showed double optic neuritis, with characteristic brilliant white spots in the region of each macula. In the course of three months, however, vision had so much improved that the patient could read the smallest test-types. The ophthalmoscopic appearances very gradually lessened—the neuritis subsided, and the white spots slowly faded away, so that at the end of twelve months nothing abnormal remained except a somewhat "filled up" appearance of the discs, some stippling of the macular regions, and the remains of former hæmorrhages in the periphery of each fundus. The albumen also gradually disappeared from the urine. Dr. Hinshelwood pointed out the importance of the case as bearing on the general doctrine that the prognosis in renal disease is necessarily of the worst order when albuminuric retinitis is present. Whilst this is undoubtedly true in interstitial nephritis, this, and other cases, show that a more favourable view is possible when the renal changes are mainly or entirely parenchymatous in character.

Professor M'Call Anderson assented to the general doctrine of the gravity of the prognosis in interstitial nephritis when this affection was associated with albuminuric retinitis. As tubular nephritis was a curable affection, it was reasonable to

suppose that in a certain number of cases all the effects of the disease would disappear, and therefore such patients might

well recover from an accompanying retinal change.

Dr. Jardine referred to a case in which, during pregnancy, there was albuminuria with almost complete blindness, the patient subsequently recovering from the albuminuria, but with a permanent impairment of vision. Here the retinal condition improved, but was far from regaining its normal degree of functional capacity.

### IV.—A CASE OF SENSORY APHASIA WITH HOMONYMOUS SECTOR-SHAPED DEFECT OF THE VISUAL FIELDS.

By Dr. Ernest Thomson.

The principal features in the case were partial letter-blindness and amnesia verbalis, with a homonymous sector-like defect in the upper right halves of the visual fields. The two former symptoms had almost disappeared in the five months which had elapsed since the onset; the defect in the fields of vision had not improved. After discussing the localising value of the symptoms, Dr. Thomson concluded, provisionally, that there had been a hæmorrhage into the white matter of the left occipital lobe, involving the lower part of the left optic radiation, and possibly also some of the connecting fibres from the cortex of both occipital lobes to the left angular region.

Dr. Hinshelwood drew attention to the fact that, whilst the patient's power of reading letters had been imperfect, she had read figures with fluency. This supported the theory that the visual memory centres were complex, and contained specific divisions, each functionally associated with a particular group

of memories.

## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1896-97.
MEETING V.—8th February, 1897.

The President, Dr. Fraser, in the Chair.

# I.—PURULENT MENINGITIS WITH CEREBELLAR ABSCESS. By Dr. Fraser.

G. S., aged 12, schoolboy, admitted unconscious on 2nd February, 1897. He was taken from a filthy home, where he

lived with his mother, whose intelligence is defective. His mother states that he came home on 31st January, complaining of headache, which became more severe on the following day. On 2nd February he became unconscious, and was removed to Infirmary.

As observed on admission, he occasionally gave vent to loud cries. Pupils were unequal, and convergent squint of right eyeball was noted. Arms were folded across the chest and held rigid; knees drawn up. No abnormality noted in chest or abdomen. Temperature, 101°; pulse, 130;

respiration, 36.

On 3rd February pupils were dilated, equal, and reacted normally. No squint. Respirations were rapid (varying from 34 to 60), laboured, and accompanied by loud tracheal râles. Abdomen was distended; liver dulness was displaced upwards, and very marked bulging of right chest was noted. Percussion gave dull note over entire right lung, except at extreme base posteriorly; R.M. was harsh and almost masked by loud mucous râles. Left lung was mainly clear to percussion, and R.M. presented similar characters to that on right side. The left upper and lower limbs were apparently completely paralysed. All reflexes were lost on left side of trunk and on left lower limb. Temperature, which rose to 104.6°, fell subsequently to 102.6°. Pulse varied from 130 to 140. Patient's condition gradually became worse, and he died at 6.30 p.m. on 3rd February.

Post-mortem Examination.—The heart was of large size; valves competent; small quantity of clear fluid in pericardial sac. The lungs on both sides, but most notably on the right, were highly cedematous. Pleura was non-adherent; no pleural fluid. The stomach and intestines were distended with gas to a high degree; otherwise normal. The liver was of large size; intensely engorged with blood. The spleen was large, but normal on section. The kidneys were also of large size;

cortex pale, showing fatty flecking.

On opening up the dura, the arachnoid space was found to contain a quantity of diffused, sticky, purulent, yellow exudation, spreading over the convexity of the hemispheres, but being most wide-spread and dense on the right side. On removal of the brain, a general exudation was found to cover the base; it lay thickly in the great transverse fissure, and passed outwards through the Sylvian fissures to the outer surface of the hemispheres. The fossa of the cerebellum was bathed in pus, which also welled up through the foramen magnum from the spinal arachnoid region. Right lateral

ventricle distended with clear fluid. Abscess cavity shown on section of cerebellum.

Examination of the dural sinuses and the middle ears, so far as that was possible, gave negative results.

Nasal mucous membrane was ulcerated, and preceding death there had occurred a foul nasal discharge.

# II.—DISEASE OF THE MASTOID AND SQUAMOUS PORTIONS OF THE TEMPORAL BONE.

#### BY DR. NEWMAN.

J. M., aged 4 years, was admitted to the Glasgow Roval Infirmary, on the 29th July, 1896, suffering from disease of the left temporal bone. The soft parts over the mastoid were inflamed and cedematous, and there was an opening leading down to bare bone. The mother of the child said that she first noticed the swelling behind the left ear five months previous to admission, and this gradually increased in size. Two months ago the abscess was opened by her doctor, and since then there has been an open sore, constantly discharging. On examination of the ears there was found to be a slight discharge from both, which becomes dry and crusted; hearing on both sides was also defective. After careful washing out, however, the discharge in the right ear ceased. but continued in the left. On the 6th of August, the condition of the bone was examined under chloroform, and almost the entire mastoid was found to be diseased. The greater part of it was removed, and on examining the squamous portion it also was found to have been necrosed; the external layer of it was removed, but it was considered inadvisable to proceed further. The patient was kept in hospital for a month, the side of the head being carefully protected by a shield. As the squamous portion of bone soon became movable, the child was brought to the hospital regularly until the present time. when the bone is seen to be movable, and can easily be detached without using much force.

This case is of interest, showing the great extent of bone disease which may exist without any symptoms, the child being in every way healthy with the exception of the local condition. He never suffered from any cerebral disturbance, nor was the general health to any appearance impaired.

This case is an instance where active surgical interference is, I think, contra-indicated, until the diseased bone has spontaneously separated. If the bone had been forcibly

removed at the first operation, I could not have avoided opening the lateral sinus, and so subjected the patient to considerable risk; but by waiting until nature had thrown off the diseased part, removal of the sequestrum should involve little or no risk. [The sequestrum was removed on the 15th February, and since then the wound has almost completely healed, and the patient is now (10th March) in excellent health.]

### III.—TWO TEMPORAL BONES ILLUSTRATING POINTS OF PATHO-LOGICAL AND SURGICAL INTEREST.

#### By Dr. BARR.

Dr. Barr's paper will be found as an original article at p. 247.

Dr. Nicoll said—It appears to me that these specimens which Dr. Barr has shown are of very considerable interest, and Dr. Barr has, in his account of the case to which the first specimen belongs, and on which I operated, emphasised the point of chief importance. This was a case in which the extension of pyogenic mischief from the middle ear and mastoid to the interior of the cranium took place by a route which has been regarded as, as it undoubtedly is, comparatively uncommon.

The usual route is an extension through the roof of the middle ear or of the mastoid antrum into the middle fossa, or through the bone into the sigmoid sinus and on into the posterior fossa. In this case the suppuration extended from the middle ear and mastoid to the internal ear, and from that along the internal auditory meatus, the result being a small abscess in the angle formed by the cerebellum, pons, and medulla, with subsequent purulent meningitis. It is not necessary to point out to members of this Society that an abscess in such a site is at a nuch greater depth from the surface than an abscess in either middle or posterior fossa due to pyogenic extension along either of the two common routes.

It so happens that in September last Dr. Barr sent into the Western Infirmary a case of probable intracranial mischief from middle ear suppuration, with an expression of opinion that, while the man's symptoms (which need not here be detailed) afforded no very definite localising indications, it was possible the mischief was in the basal region posteriorly. I opened and cleared out the mastoid of some pus and granulation tissue, and packed the cavity to sterilise it. Two

days later, when the mastoid cavity was fairly aseptic, I removed part of the floor of the middle fossa, found the dura bulging, opened it, and explored the temporo-sphenoidal lobe, but without result. At the same operation I opened the posterior fossa from behind, and explored the cerebellum, also without finding any trace of pus. The effect of this double operation was a marked relief of the man's symptoms, more particularly of the severe pain in the head, at that time his most distressing symptom. The relief lasted eight days, at the end of which time the pain and other symptoms again became urgent. Two days later he was for the third time chloroformed, and I opened up the dressings. In the opening into the middle fossa there was a marked bulging of brain tissue. This region of the brain I again explored with negative result, but the effect was again to markedly improve the man's condition. The conclusion was unavoidable that these various openings, by allowing bulging of the brain, were giving relief to intracranial pressure due to some undiscovered and deep-seated lesion. The relief obtained again lasted a week, at the end of which time the symptoms, as formerly, became once more severe. For the fourth time the man was chloroformed, and I again opened up the brain, and was again unsuccessful in the search for the lesion. Shortly after this. my term on duty coming to an end, the case passed into the hands of a surgeon with vastly greater experience in such cases than I. Some weeks later the patient died unrelieved. Post-mortem there was found an abscess in practically the same site as in the case Dr. Barr has just desbribed, with evidence of its source in a pyogenic track along the internal auditory meatus.

Surgeons who have had some experience of intracranial suppuration from middle ear disease are well aware that in such cases there are two alternate ways of investigating the situation of the abscess. In a certain number of cases the presence and site of the abscess may be fairly well indicated by localising symptoms, thus enabling the surgeon to go direct to the abscess with some degree of confidence. In other cases there are no localising symptoms. In these the surgeon starts with a patient who presents the general symptoms of intracranial mischief (temperature, pulse, pain, &c.) and who has a probable source of intracranial mischief in the shape of a suppurating ear. The surgeon takes this as his starting-point, opens the mastoid, and finds there a "lead" in the shape of a track of pus, or of granulations, or cario-necrosis, which, on being followed up, leads through the bone and membranes to

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the intracranial lesion; or, failing to find any "lead," the surgeon opens and explores the regions which experience has shown to be the usual sites of intracranial lesions secondary to ear disease.

It has been my lot to see, in different places, a large number of cases of intracranial suppuration operated on, and I have now myself operated on a not inconsiderable number, and my conviction is a pretty strong one that the cases which present definite localising evidence form a minority in the total.

Now, in such cases as we are speaking of to-night, i.e., cases where the mischief has extended along the uncommon path of the internal meatus, should there be, as happened in the two which have come lately within my observation, no localising symptoms, the surgeon is in a difficulty, for he cannot in such cases fall back on the expedient of following the lead of the track of pus or caries. Even should he suppose, after failing to find any track elsewhere, that the track must lead by the internal ear (either facial canal or labyrinth), he cannot see those deep parts, and, if he determines to explore the internal ear, he must do so with the knowledge that he is to produce a permanent facial paralysis, and possibly other serious effects.

If aurists can, in their observation of these cases, discover clinical signs which will indicate to us that suppuration has extended from the middle to the internal ear, we shall be in a position to treat a given case of probable subsequent intracranial mischief with more hope of success; for, in such a case as Dr. Barr has shown, it might have been not so very difficult to reach the abscess with safety had we known its probable position. In any event, if we were aware of the fact that the internal ear had become involved in a given case, that knowledge might save the patient the risks of deep exploration of the temporo-sphenoidal lobe and cerebellum along the

more common routes.

In regard to the facial paralysis in this case, while there can be no doubt that it directly succeeded my operation, it is a little difficult to account for its occurrence; for, as Dr. Barr has observed, and as the specimen demonstrates, my two apertures, the one into the middle fossa and the other into the sigmoid groove, are at a distance from the facial canal. It may be that the facts ascertained in Dr. Barr's post-mortem dissection of the lesion afford the explanation. Part of the facial nerve is surrounded by soft carious bone, while part of it is quite exposed through caries of its bony canal. It is therefore possible that the firmly-inserted packing of iodoform

and boracic with gauze may have caused pressure on the exposed portion, or that, in working with the gouge and chisel at the more superficial and distant parts, I may have exerted sufficient pressure to crowd the soft carious deeper parts in on the facial canal and its contained nerve.

Finally, the case affords an illustration of what Dr. Macewen has drawn attention to in his work on Pyogenic Affections of Brain and Cord, viz., that septic mischief extending into the interior, by way of the internal auditory meatus, tends more to produce purulent meningitis than abscess. In this case the abscess was of very limited size, and the meningitis wide-spread.

## IV.—SEPTIC THROMBOSIS WITH OPENING OF THE LATERAL SINUS.

#### By Dr. NEWMAN.

Mrs. C., aged 42, was admitted to the Glasgow Royal Infirmary on the 22nd September, 1895, complaining of severe headache, pain over the left mastoid, sickness and vomiting. According to the history of the case received from Dr. Donald Macphail, Whifflet, and from information derived from the patient herself, it appears that she was naturally very reserved and shy, but always active and intelligent. During infancy she had a severe attack of measles, followed by feebleness of the right arm and leg, which were weak and less developed than the left limbs; the right hand was slightly contracted, but the atrophy of the muscles was not very marked. She stated that, as long as she could remember. she had an occasional discharge from her left ear, sometimes accompanied by severe headache. These attacks were supposed to be bilious, until twelve years ago, when they were attributed to the diseased condition of the left ear. At that time the pain in the left mastoid region became troublesome. but seldom lasted for more than than a few hours. At this time she did not complain of deafness. At the age of 17, when she had been singing very vigorously all evening at a choir practice, a considerable bleeding occurred from the left ear, but it was not accompanied by pain. The attacks of pain in the mastoid region were followed by, or associated with, a badly-smelling purulent discharge from the left ear. Immediately previous to the present attack the discharge suddenly ceased.

On the 12th September, 1895, she tripped over a stone in front of her house and fell heavily, striking the left side of

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the head violently on the ground; the bruising of the left side of the body was considerable, but she continued to go about her usual work until Friday, 18th September. On that day she suffered from very severe headache, with much nausea, and on the Saturday following she was seen by Dr. Donald Macphail. He found her very feverish, a little confused at times, but not delirious. The patient suffered from severe general headache; there was slight swelling, redness, and extreme tenderness over the left mastoid, also pain in the line of the left jugular vein.

When admitted to the ward the patient was very much exhausted, and complained of severe frontal headache, and constant pain over the left mastoid region, which was most severe at night, so as to prevent her from sleeping. The more severe paroxysms of pain were followed by profuse perspiration, and accompanied by rigors and vomiting. These attacks occurred from day to day, sometimes once, at other times twice, in the twenty-four hours, and lasted from one to two hours. The pulse was from 120 to 130, small, weak, and soft. The temperature on admission was 104° F.; but during the patient's residence in the ward the temperature oscillated considerably, from a minimum of 99° to 104.4° F. The tongue was dry, cracked, and furred; the skin was dry and hard, except after the rigors, when it was moist and clammy. The pupils were moderately dilated, and equal in size; the veins of the fundus of the left eye only were congested, but the disc was clearly outlined. The pain over the mastoid was severe, but not agonising; it was increased by pressure, or by percussion in the region of the sigmoid sinus and in the posterior cervical triangle. There was also tenderness along the line of the left jugular vein for 2 to 21 inches below the mastoid process, but there was no ædema or redness of the superficial structures.

On account of the patient having suffered from right-sided pareses since childhood, localising symptoms were not easily made out. The speech was impaired, the patient having difficulty in pronouncing words, and the movements of the lips when speaking were considerably exaggerated. The patient was quite intelligent, and there was no delay in answering questions other than might be accounted for by the impairment of speech, which had been present for many years. There were no twitchings or convulsions or other localising symptoms, nor did the patient show any tendency to drowsiness or coma. The sight was good, and equal in both eyes, and there was no exophthalmos or paralysis of

movement. There was no ædema of the face or of the neck, nor were there other evidences of venous obstruction, or of pressure upon the hypoglossal or glosso-pharyngeal nerves. On admission there were no pulmonary symptoms, and beyond sickness and vomiting no indication of abdominal mischief. In this case, the diagnosis was obscured to some extent by the old-standing pareses on the right side of the body, but, taking the facts as elicited from the patient, it seemed to me that the disease was either septic thrombosis of the sigmoid sinus or abscess of the brain.

It cannot be said that any of the symptoms were pathognomonic of either condition, but taking all the facts together they seemed to point to thrombosis of the sigmoid sinus rather than abscess of the brain. In the latter condition the pain is generally agonising, the mental powers are greatly impaired, the patient becomes sluggish and drowsy, the mind is very inactive, and coma generally develops within a short time. Again, in abscess of the brain voniting and rigors are occasional, and are generally limited to the early stages of the attack. In an uncomplicated case the temperature is low, the pulse is slow, the bowels are constipated, the patient suffers from tremors and convulsions, and paralysis may manifest certain central nervous lesions; the pupils may be altered in size; there may be ptosis, paralysis of the muscles of the face, or other signs indicating local cerebral disturbance. Whereas in septic thrombosis of the sigmoid sinus, unless secondary foci have formed elsewhere, the pain, although severe, is not agonising, and it is locally increased by pressure. The patient is generally excited, and the intellect is clear; there is a history of purulent discharge from the ear for months, or may be years, but instead of the attack being sudden with pain in the affected ear, headache, and rigors, vomiting is repeated day by day, and is not limited to the early stages of the attack. The rigors are repeated, and are usually followed by profuse perspiration. The temperature is oscillating, sometimes being subnormal, at other times as high as 104° or 105° F.; the pulse is rapid and small, and generally there is local cedema and tenderness in the region of the mastoid process and also in the course of the internal jugular vein.

I decided to at once open the sigmoid groove in the expectation of finding a subdural abscess, and probably also septic thrombosis of the sinus. I made a crucial incision, the centre of which was an inch behind, and quarter of an inch above the centre of the external meatus, and reflecting

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the flaps, applied a small trephine at the point just indicated. The mastoid bone was so hard that the trephine made little or no impression upon it, but a three-sixteenths of an inch drill was soon carried through three-eighths of an inch of ivorylike bone, and the centre of the signioid groove was reached. The bit of the drill was at first worked in a brace, but when the bone was nearly perforated the brace was removed, and the bit was worked with the hand, until, on opening the sigmoid groove, 21 drachms of very fætid pus escaped. cavity made in the bone was then washed out carefully and examined; the sinus was then explored with a needle, which, when withdrawn, was found to be covered with foul-smelling decomposed blood; this was washed away, and a considerable quantity of feetid blood escaped. The groove was then plugged with iodoform gauze, so as to stop the circulation through the sinus. During and after the operation some blood escaped by the external meatus.

The patient made a good recovery from the operation. The temperature fell below the normal line, and the pulse improved in strength and regularity. The following day (23rd September), the opening in the bone was enlarged, by the use of a bur in dental engine, so as to give more complete drainage. temperature remained low, but the patient's general condition did not improve, although the pain in the mastoid region was considerably alleviated. On the 24th September the pain over the jugular vein increased, and there was a distinct line of redness down the neck. The patient's general condition was considerably worse than on the previous day. When the wound was dressed a considerable quantity of fœtid discharge came away, and on examination of the chest there were distinct evidences of pulmonary complications. From this time the patient became rapidly weaker, but did not develop any symptoms indicative of any cerebral complications, the principal symptoms pointing to septic foci forming in the lungs. She died on the 26th.

At the post-mortem examination made by Dr. Workman,

the following conditions were found:-

"Body well developed, but emaciated. A wound about 1½ inch long is found over the mastoid of the left side, which bone has been drilled. On removing the culvarium in the brain, the left lateral sinus is found to be thrombosed, and the sinus has been opened. The brain is carefully examined, but it presents quite healthy appearances. The contents of the left lateral sinus and the jugular vein, which also contains thrombus, have a very fætid smell. The drill

opening does not open into the cells, but into the centre of the jugular fossa, and the pus has probably come from there. Heart's sides, valves, curtains, and substance appear healthy. The upper lobe of the right lung is consolidated, and on section shows a septic infarction which appears to be becoming gangranous. Over this area the pleura is thickened and covered with fibrin." The left lung presents fairly healthy appearances, otherwise the post-mortem report does

not contain anything worthy of note.

This case is of considerable interest, in so far that there was no evidence of involvement of the mastoid cells, the abscess being limited to the jugular fossa. In such cases, the treatment indicated is to expose and remove, as far as possible, the focus of infection, and if possible to block its entrance into the general circulation; this was attempted by plugging the sinus with iodoform gauze; but I think I should have gone further and opened the left jugular vein, and washed the sinus out from below upwards. This is a mode of treatment which has been recommended in such cases, together with ligature of the jugular vein below the thrombus. In a case published by Mr. Ballance, the vein was thrombosed and collapsed, so as to appear simply as a rounded cord. In other instances the vein may become thickened and the thrombus may completely occlude the lumen of the vessel. This condition is probably more favourable than when the thrombosis is incomplete, and septic matter thereby has more ready access to the general circulation. In all such cases, therefore, the prognosis is very unfavourable.

In the case above recorded the injury, which the patient received on the 12th September, was probably the exciting cause of the septic condition in the lateral sinus, but the precise mode of infection was not discovered at the post-mortem examination, although carefully looked for. The upper limit of the thrombus corresponded closely to the position of the opening of the mastoid vein into the lateral sinus, so that it is quite possible that the injury caused some contamination of blood flowing through the mastoid bone, although there was no obvious or direct communication between the septic ear and the subdural abscess or thrombosed sinus.

Dr. Love said he would like to point out that the internal ear might be destroyed without any disease or interference with the brain. He also said that in operating on the internal ear one was apt to cause facial paralysis. This had occurred to him in three cases. Two of these made a perfect recovery,

but in the other, which came on fourteen days after the.

operation, the paralysis remained permanently.

Dr. Renton said he would like to know what Dr. Barr would have done had he known the whole facts of the case as they subsequently emerged. His own practice is to open the mastoid in acute suppurative disease of the ear, but he is not satisfied with the operations in chronic disease which has taken an acute action.

Dr. Macphail said amongst the public ear disease was very much disregarded, even when a stinking discharge might be-

escaping from the external auditory meatus.

Mr. Maylard asked what opinion existed as to the period that should be allowed to elapse between the first sign of discharge from the ear and operation. With regard to Dr. Newman's case, he thought if the jugular had been ligatured in two places, and the sinus washed out, the case might have done well.

Dr. Burr said, in reply to Mr. Maylard, that it was difficult to fix a period for operation after the discharge commenced, as the conditions varied so much in individual cases. If the ordinary methods for treating chronic discharge were carried out faithfully for three months without cure, then an operation was necessary. It was not good policy to begin by operative treatment. To Dr. Renton, he said that he intended to operate on the other ear, but the supervention of grave symptoms stopped him. An important distinction was to be made between acute and chronic cases. In acute cases the operation was simple, and all should recover. In chronic cases the pathological conditions were different, and the results were not satisfactory, but the recent advances in the operation promised much better results.

#### V .- CARD SPECIMENS.

Several skiagraphs were shown—one by Dr. J. K. Loveof a needle in the hand; and another, by Dr. W. J. Fleming, a minute fragment of needle in the hand.

Mr. Maylard showed one of a needle in foot. In this case two photographs were taken from different points of view, so as to accurately localise the position of the needle.

### OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

#### Session 1896-97.

MEETING III.—16TH DECEMBER, 1896.

The Vice-President, Dr. J. NIGEL STARK, in the Chair.

## I .-- A CASE OF TUBAL GESTATION ABOUT THE FIFTH WEEK.

By Dr. G. Balfour Marshall.

Ectopic gestation is of sufficient rarity to justify every case being faithfully recorded, more especially so if there have been mistakes or difficulties in diagnosis; indeed, the latter class of cases are of infinitely more value than a mere record of success, as by pointing out our pitfalls we ourselves learn a lesson and others avoid them.

The symptoms of early tubal gestation—and I believe that all ectopic pregnancies are at first tubal—are so varied and uncertain, the condition is one of such danger to the life of the patient, and a mistake in diagnosis may be so disastrous, that any and every sign or symptom should be carefully noted.

In some cases the patient suspects she is pregnant, the usual signs and symptoms of early pregnancy being well marked.

In other cases there are none. There is no amenorrhoea, the breasts show no fulness (indeed, breast signs may be absent till mid-term), and the patient is quite unaware of her condition or the danger she is in, until suddenly, it may be after sexual congress, as in the case I described last spring, she feels as if something had given way, and you are called to her bedside to find her pale and faint, the pulse rapid and feeble or almost imperceptible, the respiration sighing, and the temperature subnormal.

The patient is bleeding to death from internal hæmorrhage, and may die in a few hours if means are not at hand to try and save her by immediate operation.

In yet other cases there may be some warning sign or symptom, such as irregular uterine hæmorrhage, which should arouse suspicion, and it is to this that the following draws special attention. Mrs. Y., æt. 32, six years married, was first seen by me on 16th June, 1896. She complained of never having felt well for the last three years, suffering from pain in the back and right side; and since her last normal menstruation three weeks before she had three attacks of uterine hæmorrhage. She first menstruated at 18, the menstrual type is twenty-eight days, and the periods last two days with a moderate flow.

She sometimes had dysmenorrhoea, but this disappeared after marriage, to return, however, with the commencement of

pelvic trouble three years ago.

Her first pregnancy ended a few months after marriage in an abortion at the third month, but this had no injurious effect on her health. During the following two and a half years she had two pregnancies, both lasting to full time. The second child, however, was stillborn after a prolonged and This was three years ago, and since then she difficult labour. has never been quite well, suffering from more or less pain in the right side and back, aggravated at each menstrual period. About one year ago she was laid up with symptoms which evidently pointed to pelvic inflammation. She was confined to bed for two months and was unfit for work for another month. This attack left her pelvic condition worse, as the pains in the back and right side have been more severe ever since, and to this was added left infra-mammary pain. Although accompanied by dysmenorrhæa, menstruation has always been regular as regards periodicity, nor does the patient think she loses more than before.

Her last normal menstrual period was, according to the patient, at the end of May, and between that time and the 16th of June she had without warning three attacks of uterine hæmorrhage lasting a day or two on each occasion. The discharge was said to be brownish with blood clots, but she could not say if any shreds had come away. Suspecting early abortion, I carefully enquired as to any facts likely to bear on the probability of this, but there was absolutely nothing as regards early signs or symptoms to justify any suspicion.

Between the attacks of hæmorrhage there was slight leucorrhœa.

The patient was very nervous, and this rendered the examination for purposes of exact diagnosis more difficult than it should have been, as a subsequent examination under chloroform narcosis showed.

The following is taken from my case-book as the result of examination on 16th June:—

Per Vaginam.—The vagina shows nothing abnormal. The cervix is somewhat short, but shows no undue softness nor gaping of the os externum as pointing to recent abortion.

Bimanual.—The uterus lies anteflected and slightly sinistroflected, and feels somewhat enlarged. The left side of the pelvis shows nothing abnormal, the left ovary being of usual size and freely movable. On the right side, however, there is an ovoid body which feels a little larger and softer than the left ovary, but apparently not more sensitive. This is an enlarged right ovary, which lies a finger's breadth from the side of the uterus, and seems to be bound down by adhesions, as it is fixed in that position. (Examination under chloroform several days later showed I had mistaken a tubal gestation for the right ovary.)

Sound.—The sound passes nearly 3 in., and causes much pain on passing the os internum and touching the fundus uteri, and it is blood-stained on withdrawal. The endometrium seems smooth.

Diagnosis.—The history of pelvic inflammation, the dysmenorrhoea, the enlargement of the uterus, the pain on passing the sound and its being blood-stained on withdrawal, pointed, as I thought, to endometritis and an enlarged slightly cystic right ovary with adhesions resulting from old pelvic peritonitis.

Sudden irregular uterine hæmorrhage after previous normal menstruation always leads one to suspect abortion or ectopic gestation, more especially so if there has been amenorrheea

for six or ten weeks.

There was, however, in this case no period of amenorrhœa, and although at first I suspected abortion, it was excluded by

the history and by pelvic examination.

Mere absence of amenorrhoea is no justification for excluding uterine gestation, as menstruction is possible during the first two months—i.e., until the decidua reflexa has come everywhere in contact with the decidua vera, which it does by the third month.

Having excluded abortion, and in the absence of anything suspicious in the pelvis, as I thought, the idea of ectopic

gestation was never for a moment entertained.

Accordingly, arrangements were made to have the uterus curetted, an operation I almost always do with the patient anæsthetised.

On 26th June the patient was chloroformed for curetting, and according to my invariable rule, especially in those cases.

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not previously examined under narcosis, I made a thorough and careful examination to confirm the previous diagnosis and see that no other pelvic condition had been overlooked. I was agreeably surprised—from my point of view—to find a state of affairs that changed the previous diagnosis to one of tubal gestation.

During the previous ten days there had been other two

short attacks of metrorrhagia, thus making five in all.

On examination the cervix seemed softer than it had been before, otherwise the size and position of the uterus were much the same. What I had previously taken for the right ovary was found to be larger than before, about the size and shape of a small walnut, and situated in the ampulla of the right Fallopian tube. It did not feel cystic, having more a boggy consistence, and it seemed to be quite free from any adhesions. Between the inner end of the tumour and the uterus there was a piece of thickened tube about a finger's breadth long, while from the outer end equally thickened tube could be distinctly felt passing outwards and backwards. The tumour thus formed a portion of the ampulla of the right The right ovary was distinctly enlarged compared to the left, and seemed about the same size as the tubal swelling. It was, however, firmly fixed by adhesions close to the posterior wall of the pelvis, and was quite immovable, a condition which readily accounted for its easy oversight at the first examination ten days previously.

The characteristic consistence and position of the tubal swelling, the enlarged right ovary due, as suspected, to a corpus luteum, together with the symptoms left no doubt in my mind that it was a tubal pregnancy, probably about the

fifth week judging from its size.

Dr. Jardine, who was with me, also examined the case and

confirmed the opinion formed.

Taking advantage of the fact that in ectopic gestation the uterine mucosa early shows decidual changes, I had determined on the first opportunity to take a scraping for the purposes of microscopical examination, to test its value as an aid to

diagnosis.

This I did, and found in some portions the characteristic decidual cells of pregnancy. From the small amount of tissue, however, which came away with the curette, a quantity of the decidua must have been thrown off in the previous uterine hæmorrhages, for I have noticed in the microscopical examination of other cases that the uterine mucosa is markedly hypertrophied, and that while the decidual cells are very No. 4.

distinct towards the surface, they are fewer in number in the deep layers, and largely mixed with round and spindle cells. From the scantiness in the number of decidual cells in the microscopic sections examined, the scraping must have been from the deep layer of the mucosa.

In using the curette I further noticed that the mucosa bled

freely, as if very vascular.

Some will say that such a procedure as partly curetting the uterus in tubal gestation is risky and fraught with danger to the patient, and so it may be if carelessly done. For my part I do not see where danger should arise if the scraping is taken with care and without pulling down the uterus. It may, moreover, prove of great value in confirming an opinion in those cases where there is difficulty in making an accurate diagnosis.

Operation, 3rd July.—After this examination the patient was kept at absolute rest in bed till the operation for removal

of the affected tube.

With Dr. Jardine's kind assistance I opened the abdomen on 3rd July. The tubal gestation sac was now found increased to a rounded tumour 1½ inch in diameter, and of a a tense, hard, elastic feel. It lay close to the uterus, the intervening piece of tube being thick and short. The sac and tube were free, but the right ovary was firmly fixed close to the posterior pelvic wall by numerous flat adhesions, which had to be separated before the tubal mass could be pulled up. The anterior surface of the uterus was also adherent to the fundus of the bladder, and these had to be separated. It was with some difficulty that the right tube and ovary were brought up to the abdominal wound, and in doing so the gestation sac ruptured and showed the ovum converted into a mole.

The peritoneum was more vascular than normal, and the wound left close to the uterine wall after cutting away the sac had to be closely stitched with a continuous catgut suture

to stop the free oozing of blood.

Convalesence was uneventful, and the stitches were removed on the eleventh day, the abdominal wound being healed by first intention. The patient is now well, in good health and and free from pain, the operation having cured her of her old symptoms.

Pathological Anatomy.—The tubal mole forms an almost spherical tumour, 1½ inch in diameter, with its inner wall lying close to the uterus. It is much thinned anteriorly, where it gave way during the operation, but other parts are thickened, due to an increase both in the muscular and fibrous connective

tissue. The muscular fibres are, however, degenerated, having a hyaline appearance under the microscope. The blood-vessels also show increase and hypertrophy, rendering the sac wall much more vascular than normal. The mucous membrane is quite flattened, its normal foldings being obliterated, and it shows a similar change to that found in the pregnant uterus, there being decidual-like cells, spindle and round cells. There is, however, no trace of superficial epithelium.

On section, the contents of the sac have the appearance of an ordinary blood mole, but there is no trace to the naked eye of either amniotic sac or embryo. The hæmorrhage has occurred not only into the space between the amnion and chorion (subchorionic space), but also between the chorion and

the sac wall, completely destroying the ovum.

Microscopical sections from different parts of the mole show amnion, chorion, and chorionic villi more or less degenerated.

The syncytium of the villi is in many cases made out with difficulty, as it has taken on either a very faint logwood stain or none at all, while the structure of the connective tissue core is greatly hidden by deposits of blood pigments. The epithelial covering of amnion and chorion shows similar degenerative changes, although in some places it has stained much better with hæmotoxyum. The connective-tissue structure of these membranes is also hidden by deposits of blood pigment arranged in longitudinal lines parallel to the surface of the epithelium.

Remarks.—There is nothing evident to the naked eye to suggest the cause of the tubal gestation in this case. Peritonitic adhesions, which have often been alleged as a cause, were present on the right side of the pelvis, fixing the ovary and binding down the uterus, but the tube itself was in no way affected, being neither constricted nor unduly twisted or bent.

In my last paper on tubal gestation the various supposed causes of ectopic gestation were discussed, but the etiology will probably continue to remain a matter of doubt until it is accurately determined whether the ovum be fertilised normally in the uterus or tube, or in either of them. If we could prove that the ovum is in all normal cases fertilised in the uterus, then we could more easily understand ectopic gestation, for the changes in the ovum after impregnation are so rapid, that should one, contrary to the rule, be fertilised in the tube, it may almost immediately engraft itself there, even although the tubal mucosa is quite healthy, and the lumen quite patent, and offering no obstruction to its outward

passage. In connection with this, it is interesting to note that most cases occur in the ampulla or widest part of the tube, and not in the isthmus or uterine portion, where obstruction

to an enlarged ovum would most likely happen.

A point of interest is the probable date of conception, which evidently occurred sometime in May before the last (apparently) normal menstruction. Although there was no definite history of decidua having been thrown off, yet, from the nature of the curetted portions such I think did happen. It has been stated, however, that this or a single uterine hæmorrhage is quite consistent with the continued life and growth of the ovum in the tube. On the other hand, repeated hæmorrhage usually indicates death of the ovum in ectopic gestation, so that the recurrent metrorrhagia during the four weeks prior to 26th June is strongly in favour of this having occurred sometime then. The consistence of the tubal sac at that time is, however, against the ovum having died much before, if at all before, 26th June, as the sac had a boggy, somewhat soft feel, pointing to a living ovum or one just dead. If the embryo dies the tubal sac feels tense, hard, and elastic owing to a tubal mole having formed by hæmorrhage into and around the ovum, and this must have occurred during the week between 26th June and 3rd July. I therefore think the ovum did not die at the beginning of the metrorrhagia, but after there had been four or five recurrences, and as the sac at 26th June seemed to indicate an embryo about the fifth week, fertilisation probably took place seven to fourteen days before the last (apparently) normal menstruation in the last week of May.

Dr. Kelly had not heard the whole of the case, but he wished to refer to one practical point. He (Dr. Marshall) mentioned that he had stitched the wall of the uterus.

Dr. Marshall explained that there had been oozing of blood owing to gaping of the wound, the tumour being so close to the uterus.

Dr. J. M. Munro Kerr said that this was a most interesting case, especially in the points raised regarding the diagnosis. As regards scraping, considerable doubt existed, because a portion of the membrane was often shed, and even when a good portion was got the changes in the cells were not always absolutely characteristic. There was not the definite grouping. He had found chronic endometritis set up changes which much resembled the appearance seen in the decidual cells. Therefore, unless there were distinct groups it was impossible to tell. As to curetting, he pointed out the danger of hæmorrhage

such as had occurred in this case, and that this might set up contraction of the sac, and, as a consequence, rupture might occur. One other point of interest was as to whether the embryo was dead. The only symptom was a shedding of the decidua.

Dr. Samuel Sloan wondered whether it was possible that the sac was not ruptured when the first examination was made. It was difficult to say when this pregnancy began. A normal menstruation at the end of May was hardly possible. He referred to the presence or absence of pain as an aid to diagnosis.

Dr. Jardine said he had been fortunate in seeing this patient with Dr. Marshall. The scraping had confirmed their diagnosis, but they had no difficulty in making up their minds. The operation was not difficult. As to the stitching of the uterine wall, it was rather a stitching of the peritoneum, which

had retracted slightly.

Dr. Stark said that Dr. Marshall had been fortunate in getting his case early. Muscular degeneration showed the danger of early rupture. He thought there was no need for curetting in clear cases. Another interesting question had been raised regarding the date of the last normal menstruation.

Dr. Balfour Marshall, in his reply, said that a single throwing off of decidua was quite consistent with the life of the ovum. Of more value was the repeated hæmorrhage. Normal menstruation was possible, even in uterine pregnancy, for two months. From the size of the cyst he was convinced that pregnancy took place at the time he had assigned.

# II.—A NOTE ON DELIVERY IN THE WALCHER POSITION IN A CONTRACTED PELVIS.

#### BY DR. JARDINE.

As I have very recently had an opportunity of trying what is known as the Walcher position in delivering a woman with a markedly contracted pelvis, I have thought it might interest the Fellows of the Society to bring the case before them to-night.

Mrs. B., 6-para, was admitted to the Maternity Hospital on the 20th November, sent in by Dr. Houston, of Shettleston. She had been in labour for twelve hours. Chloroform had been administered to her, and presumably an attempt had been made to deliver her, but of this she was not sure

On admission, she had strong and frequent pains, and she appeared exhausted. Sordes were present. Temperature, 98°; pulse. 100, and fairly strong. The fœtal heart was very

rapid, 168.

Per Vaginam.—The rim of the os was still felt. promontory was easily reached, but the large caput succedaneum prevented accurate measurements being taken. The head lay transversely with the occiput to the right, and the saggital suture close to the promontory. The head was fixed,

and had not passed the brim.

I decided to try Milne Murray's axis traction forceps in the ordinary position first; if this failed, to give a trial to the Walcher position. Dr. Dick, the resident, applied the traction for a little while, and I kept my finger on the head to judge of the progress. The caput enlarged, but the head did not pass the brim. The patient was then placed on her back with her buttocks at the edge of the bed, and the legs were allowed to hang down, the feet not touching the floor. On applying much less traction than before the head passed the brim easily. The patient was then placed in the ordinary position, and the head brought down on to the perineum. The forceps was removed to allow the head to rotate, and delivery was easily accomplished by expression.

The child, a female, was stillborn. It weighed 81 lb. The head presented an enormous degree of moulding. The biparietal diameter was 3 inches, and just above the ears 31 inches, occipito-frontal 4½ inches. The patient made a good recovery.

I measured the pelvis before dismissing her. The intercristal diameter was 103 inches; the interspinous diameter, 101 inches; external conjugate, 7 inches; diagonal conjugate, 31 inches by my measurement, and 31 inches by the resident's. The conjugate vera cannot be more than 23 inches.

markedly rachitic, and her pelvic bones very thick.

Former Obstetric History.—Her first and second children were born dead at full time, both delivered instrumentally, whether by forceps or craniotomy she could not tell. Her third child was born alive prematurely, and is still alive. Labour was induced by Dr. W. L. Reid, she says, between the eighth and ninth month. The fourth child was delivered by Dr. Black in connection with out-door service of the Hospital. It was delivered dead at the seventh month by turning. The conjugate vera was noted as being 21 inches. The fifth pregnancy was terminated in the Hospital last year by Dr. Oliphant by craniotomy at full time. The out-door man had seen her at her home and brought her into the

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Hospital. The child weighed 6½ lb. minus the brain, so it must have been considerably smaller than the sixth one delivered by me.

Years ago the late Matthews Duncan showed that there was a certain amount of movement in the pelvic articulations during parturition, and that by what he called the mutation of the sacrum the conjugate vera could be increased by about in. By rotation of the innominate bones round an axis which passes through the sacro-iliac joints, the symphysis pubis is drawn away from the promontory, thus increasing the conjugate at the inlet but decreasing it at the outlet. The weight of the legs do this, acting through the ilio-femoral ligament (ligament of Bigelow), which is attached "above, to the anterior inferior spine of the ilium, and below, to the anterior inter-trochanteric line" (Gray).

The amount of increase varies, and different observers have given different results, but roughly speaking it may be estimated at one-third of an inch. A good description of the position will be found in Fothergill's book on midwifery, and also in a paper on the subject by him in the *British Medical* 

Journal of 31st October, 1896.

This hanging of the legs is not only useful in increasing the conjugate, but it also relaxes the parts about the vulva, so that there will be less danger of the soft parts being lacerated by the shanks or traction rods of the forceps in drawing the head through the brim. After the head has passed the brim, the ordinary position should be resumed until the head is drawn down on to the perineum, and then, if there is any danger of laceration of the perineum, the legs may be allowed to hang down again to relax the parts.

The position is not only useful in forceps delivery, but also in delivering the after-coming head in turning or breech cases,

or the diminished head after perforation.

I intend trying it in all suitable cases in the Hospital, and may be able to give reports of a number before the end of the session.

Dr. Samuel Sloan said that this was a most interesting case. He was only amazed to find that a child weighing 8½ lb. could be drawn through a pelvis of the size described with so little apparent difficulty. He thought this position recommended by Walcher deserved trial.

Dr. Stark said he had tried this position in a patient with

a conjugate of 3 inches where the child weighed  $7\frac{1}{2}$  lb.

### III.—SPECIMENS.

#### By Dr. John Lindsay.

Dr. John Lindsay showed a preparation of a normal human embryo, of about sixteen days, judging by the development, the branchial arches not having yet appeared.

He also showed specimens, casts, and photographs of various congenital deformities, arrested development of the arm, congenital dislocation of the leg at the knee, supernumerary digit, &c.

### REVIEWS.

Medicine and Kindred Arts in the Plays of Shakespeare. By Dr. John Moyes, Largs. Glasgow: James Maclehose & Sons. 1896.

WE cannot peruse this little volume without a tinge of regret that its author did not live to see it published. The subject had occupied his thoughts and engaged his spare moments for many years, and much of what is herein contained formed his Thesis for the Doctorate in Medicine of Glasgow University in 1886. Taking it up at intervals during the next eight years, he consulted various authorities, both living and dead, studied the state of medical knowledge in the Elizabethan age, and compared Shakespeare's allusions with similar ones in the works of Marlow and Ben Jonson. When seized by his fatal illness in December, 1894, he had decided on publishing the work, and had got a small portion of it set up in type, but was forced by the rapid progress of his illness to give up the attempt, and his MS. was therefore left unfinished.

It was fortunate that Dr. James Finlayson was able to take up the work where Dr. Moyes left off, and to bring it to the press under his editorial supervision. In his very modest preface Dr. Finlayson suggests that a "competent editor" might have carried on the work, implying thereby that he himself is not "competent" for the post he occupies. In this, we think, he does himself an injustice, for we are satisfied that in his hands Dr. Moyes' manuscript has undergone careful and laborious revision, and we believe there are few pages that do not bear some mark of his judicious emendation. If we are not mistaken, the long note on the treatment of syphilis by

the tub (pp. 95-97) is from his pen, while the carefully compiled bibliography of Shakesperian medicine at the end of the

book is the product of his labours.

In producing such a work, one difficulty the author experiences is in drawing the line between general and specific medical references; were the former included, a book of fully twice the dimensions of the present one might easily be produced. Dr. Moyes very wisely decided to exclude the subject of insanity, as depicted by Shakespeare, as being one on which a large mass of writing by competent authorities already existed. Within the limits which he thus set himself, he has produced a very accurate, readable, and instructive work. There are omissions, as probably there will always be in works of this character. Thus the author has overlooked the reference to ague in "Antony and Cleopatra," iii, 13, l. 138-9; also, to epilepsy in "King Lear," ii, 2, l. 87; and to a plantain leaf as a popular cure for a wound in "Love's Labour Lost," iii, 1, 1. 77-8. Probably he was not familiar with the word "matter" as meaning suppuration, or the reference in "Love's Labour Lost," iii, 1, l. 120, would not have escaped him; the term is in very general use throughout the Midlands of England. In regard to one quotation, we think Dr. Moyes has adopted a wrong reading; the "green sickness" from which Lepidus was said to be suffering ("Antony and Cleopatra," iii, 2), was not chlorosis, but jealousy. Green and yellow were both jealous colours, and Viola, in the "Twelfth Night," describes her imaginary sister as pining away with a "green and yellow jealousy."

The book is notably free from typographical errors, but we note, on page 38, that the reference to "Pericles," iv, 5, should

be iv, 6.

This little work is not only an interesting memento of a respected practitioner, it is a valuable study of an interesting subject, and will, we trust, stimulate many a medical man to a more intimate study of the works of Shakespeare.

This edition of Osler's medicine has been thoroughly revised and brought up to date, several of the sections having been rewritten. The articles on typhoid fever, diphtheria, and

The Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine. By WM. OSLER, M.D., F.R.C.P. Second Edition, thoroughly Revised. Edinburgh and London: Young J. Pentland. 1895.

malarial fever have been revised, and in great part rewritten, so as to include the great advances which have recently been made in our knowledge of the ultimate pathology of these conditions. We have frequently consulted the volume on many points, and have no hesitation in thoroughly recommending it as a valuable work, in all respects worthy of the high reputation of its well-known author.

Transactions of the British Balneological and Climatological Society for the Year 1895-96. London: John Bale & Sons. 1896.

This volume contains the Society's transactions from its foundation in November, 1895, to the close of its first session in June, 1896, together with a copy of the amended laws of the Society. It was decided in October, 1896, to publish a quarterly journal, the first issue of which should appear in

January, 1897.

Among the subjects which have come under consideration at ordinary meetings of the Society may be mentioned "Articular Gout and its Treatment by Natural Sulphur Waters;" "Modern Improvements in British Balneological Practice;" "Some Factors in our Atmospheric Environment, and their Relation to Health;" and "Bridge of Allan," the last mentioned being communicated by Dr. Haldane.

# ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### NERVOUS DISEASES AND INSANITY.

By Dr. R. S. STEWART.

The Patellar Tendon Reflex in Syphilis. By Zabourine (Le Progrès Médical, 19th and 26th December, 1896, and 2nd January, 1897).— A considerable number of phenomena occurring during the secondary stage of syphilis indicate the existence of an affection of the central nervous system, but these have been observed, so far, in the motor and sensory spheres, rather than in the reflex. From a careful investigation of eight cases, Zabourine arrives at the conclusion that at the commencement of the secondary eruption there is an elevation of the reflex excitability of the tendons, and consequently a reinforcement of the knee-phenomenon, that this elevation is shortly followed by a progressive diminution of the reflex excitability, which often falls below the normal, and afterwards rapidly remounts to its normal height.

Etiological Influence of Alcoholism in Idiocy. By Bourneville (Le Progrès Médical, 9th January, 1897).—The considerable rôle which alcoholism plays in the production of degenerate infants, idiots, epileptics, and moral imbeciles is brought out in a statistical enfanty referring to 1,000 cases. In 471 instances there was a history of alcoholism in the father, in 84 in the mother, and 65 in both. In 57 cases conception occurred certainly during drunkeness in the father, and very possibly in 24 other cases.

The Obsession of Blushing (Ereuthophobia). By Pitres and Régis (Archives de Neurologie, January, 1997). - From the point of view of the moral effect produced by blushing, these writers recognise three degrees. To the first belong individuals who have an extreme facility, sometimes innate, sometimes acquired, to blush; but what distinguishes them is their entire absence of preoccupation. Either they experience no emotion, or if they are troubled, it is only momentarily. In the second degree are found individuals who not only blush very frequently, but who are tormented by it more or less, but this annoyance never amounts to an obsession, and the trouble gradually diminishes and disappears. To the third category belong those in whom the anxiety about blushing amounts to a veritable obsession, an extremely painful, persistent, and incessant fear. In the first the affection is a purely vaso-motor one; in the second there are two elements, the tendency to blush with a morbid emotion-i.e., vaso-motor and subjective; in the third there are these two and an additional element, the intellectual, the fixed idea. Eight cases of the third variety are described, and the features presented by them are strikingly uniform. It preponderates in males between the ages of 20 and 30, and occurs in members of families which possess neurotic, alcoholic, and tuberculous individuals. The blushing dates from infancy, but it is only from the period of puberty that the sense of uneasiness dates, and the crises of blushing occur under the same conditions, and under the action of the same influences.

Epilepsy and its Treatment. By Bryant (State Hospitals' Bulletin (New York), October, 1896).—It is suggested that in idiopathic epilepsy, a toxic substance accumulates in the system and exerts at intervals an irritating effect upon the brain. Acting upon this theory, the writer views with disfavour the use of the bromides, and directs his attention entirely to the securing of a thoroughly aseptic condition of the intestinal tract.

Auto-toxic Origin of Epilepsy. By Teeter (State Hospitals' Bulletin (New York) October, 1896).—The two most potent factors in epilepsy are, in the writer's opinion, heredity and the development of a habit, and he regards the latter as associated in some way with the existence of an auto-toxic substance. He finds, in support of this view, that there is an average increase in the amount of urea found in the blood-serum of cases of idiopathic epilepsy above that of normal man, though there seems to be but little relation between the amount of urea found and the epileptic paroxysm, as in some cases there was an increase directly after a fit, and in others a diminution.

Treatment of Epilepsy. By Harris (State Hospitals' Bulletin (New York), October, 1896).—An analysis of forty-two cases in which several methods of treatment (trional, strontium bromide, the bromides, and iron hydrocyanate) were employed; result not decisive.

Sulfonal and Trional in Epilepsy. By Frost (State Hospitals' Bulletin (New York) October, 1896).—The superiority of bromides over other drugs in the treatment of epilepsy is acknowledged, but the writer thinks that these two drugs will prove useful as adjuncts to the bromides, with which they can profitably be alternated, and as safe and effective sedatives during attacks of restlessness and mental excitement.

Consciousness in the Epileptic Attack. By Bannister (American Digitized by COOCIC

Journal of Insanity, January, 1897).—This writer holds that the epileptic discharge in the cerebrum may in some cases not involve at all, or to any extent, those organs or parts concerned in psychic function so as to seriously affect or to abolish consciousness; that there may be states of epileptic double consciousness in which it cannot be said that the mental functioning in the abnormal condition is less perfect and complete than in the normal state; that the post- (or pre-) epileptic outbreaks of violence, while attended with excessive irritability and loss of control, need not be accompanied by any greater impairment of consciousness than would naturally be caused by intense emotional disturbance in other conditions; that there may be true or apparent automatism not attended with any loss of general consciousness; and that, therefore, the definition of epilepsy which makes loss of consciousness an essential, is an arbitrary one, not suppported on pathological or clinical data, either in the ordinary convulsive phase of the disease or in its psychic manifestations.

Bone Marrow in Anæmia. By Mann (American Journal of Insanty, January, 1897).—As the result of the administration of marrow to twenty-two patients for one month it was found that there was an average increase of one and a third million red corpuscles per cubic millimeter, a percentage increase of hemoglobin of 12.5, a diminution of leucocytes, and, in the majority of cases, a general improvement.

### MEDICINE.

Peritonitis in Enteric Fever with regard to Surgical Interference.—The appearance of Dr. J. Francis Gairdner's interesting and suggestive article on Peritonitis in Enteric Fever with regard to Surgical Interference leads me to believe that the readers of the Glasgow Medical Journal would welcome a résumé of the recent discussion on the same subject in the Académie de Médecine.

The discussion was introduced at the sitting of 27th October, 1896, by Professor Diculatory, under the title, "De l'Intervention Chirurgicale dans les Peritonites de la Fièvre Typhoide," and was briefly continued and concluded at the following sitting on the 3rd of November by Drs. Lereboullet and

Ch. Monod.

Prof. Diculatory begins by pointing out the recent magnificent results of surgical intervention in all forms of peritonitis—e.g., in perforating gastric or duodenal ulcers, in tubercular and appendicular peritonitis, affections that were so peculiarly the province of the physician. But, in typhoid fever particularly, the surgeon must always depend for the indications and the counter-indications of operation, for knowledge of the moment to operate, upon the advice of the physician.

Prof. Diculatory then sketches the various forms of peritonitis in typhoid fever. Hitherto these have been considered as two—(1) by perforation of a Peyer's patch or of an ulcerated closed follicle, and (2) by propagation or extension of the infective processes through an ulcerated but unperforated

intestine.

Peritonitis by Perforation rarely announces itself—as is too often supposed—acutely, with sudden pain and marked constitutional disturbance. On the contrary, its onset is generally insidious. The sensibility of the patient is blunted, the peritoneal infection takes place very slowly, and the actual occurrence of perforation may pass unperceived.

Hiccough is an important symptom, and if in the course of a typhoid fever it be added to abdominal pains, with nausea, vomiting, and an unusual amount

of meteorism, the peritoneum is affected.

But of these symptoms none has the importance of the temperature,

perforation in typhoid fever betraying itself, in the great majority of cases, by a sudden fall in the temperature, from 103°, 104°, 105°, a few hours before, or the night before, down to 99°, 97.8°, 96.8°, and lower. This sudden fall usually reaches a subnormal range, is unaccompanied by rigors, and takes

place without the patient's knowledge.

Prof. Dieulafoy then gives the history of four patients, with charts illustrating this sudden fall, quoting observations of Barbe in his thesis on perforations of the small intestine (Paris, 1895). This low range of temperature is by no means a constant accompaniment of typhoid perforation, but it is a sign of incontestable value. On the other hand, sudden falls in temperature need not necessarily signify perforation. Thus, in some rare cases the defervescence is as sudden as that of pneumonia, when, however, the general symptoms would show a corresponding improvement; or it might be due to an intestinal hæmorrhage, in which the temperature falls suddenly, to remount, however, in a few hours as high as ever, whereas in perforation the reascent is very gradual.

In the great majority of cases the result of perforative peritonitis is death in three to eight or ten days, after gradually advancing collapse, with feeble, rapid pulse, profuse perspiration, and coma. Sometimes adhesions form in time, and the patient recovers, although the temperature falls over 7°, and the tympanitic abdomen, pain, vomiting, and hiccough have given rise to the gravest prognesis. It is in such cases that actual perforation is doubted, and

the so-called peritonitis by propagation or extension is invoked.

Peritonitis said to be due to extension of infection through an ulcerated, but not perforated, intestine:—the name was given by Trousseau, following a mémoire by Thirial in 1855, and has since been faithfully described by most authors as more circumscribed and more benign than peritonitis by perforation. Dieulafoy sets himself to show that this so-called peritonitis by extension

does not exist.

He shows that Thirial's original mémoire is based on four cases with very imperfect autopsies, it being merely noted that peritonitis was present and Peyer's patches were found cicatrised. The post-mortem examination seems to have been limited to an examination of the intestine for the supposed perforation, the theory of extension being based on the negative result, and his first thought is that these cases of peritonitis were appendicular in origin, although the appendix is not even mentioned in the reports. Indeed, if typhoid peritonitis by extension really existed, many more enteric patients would die of peritoneal infection. Such a peritonitis, which Dieulafoy prefers to call "peritonitis by migration or emigration," can only occur when such a microbe as the bacillus coli is in a closed cavity (the appendix in certain conditions, a strangulated hernia, volvulus, &c.), round which peritonitis may be set up. Dieulafoy thus concludes that, if there is no perforation, there is an intestinal fissure, or an infected gland, or the gall-bladder is perforated, or the appendix is at fault.

Appendicular Typhoid Peritonitis.—Paratyphoid Appendicitis.—The appendix becomes infected in two ways—either perforation takes place in consequence of typhoid ulceration of the lymphoid tissue in the appendix, just as it does in Peyer's patches, or it is a genuine appendicitis that develops with the accompaniments and consequences of an ordinary appendicitis, save that it has arisen in the course of typhoid fever. Both are due to the lymphoid lesions of typhoid fever in the appendix, and they are what have hitherto been described under the titles of peritonitis by extension, peritonitis with spontaneous recovery, peritonitis during convalescence, &c. They much more frequently result in adhesions and a circumscribed peritonitis than in general infection. They are not easily distinguished from typhoid peritonitis from

perforation, but they usually provoke a rise of temperature.

Dieulafoy concludes, therefore, as follows: -

1. Perforation with peritonitis may take place during the acute period or the relapse of typhoid fever. It may be in ileum, cæcum, appendix, or colon, and may occur in slight as well as in severe cases. The principal sign

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is a sudden fall of temperature to subnormal degrees. It is an extremely grave

complication, but the perforation may be shut off by adhesions.

2. Paratyphoid Appendicitis may arise during the decline or convalescence of typhoid fever. It is generally accompanied by a rise of temperature, and runs the course of an ordinary appendicitis. There may follow no peritonitis, or there may be any of the complications of appendicitis, encysted peritonitis, general peritonitis, abscess of liver, abscesses at a distance.

3. The so-called typhoid peritonitis by extension does not exist.

Treatment.—Medical.—Opium, ice to suck, and cold applications to abdomen. Surgical Intervention.—A distinction must be made in diagnosis, as far as possible, between paratyphoid appendicitis and peritonitis by perforation. In the former case operation should be undertaken, attention being paid to the points emphasised in Dieulafoy's studies upon appendicitis (Bulletins de l'Acad. de Méd., t. xxxv, p. 260, 1896). The question of operation in perforative peritonitis is much more difficult. M. Lejars publishes a list of twenty-five cases of laparotomy with six recoveries. Dieulafoy then cites in detail one case. Patient enters hospital twelfth day of fever; on fifteenth day some general abdominal pains, and temperature falls from 102.8° to 99.2°, rises again a fraction of a degree, and next day falls to 97.2°. The abdominal pains had practically disappeared, but there was some hiccough. Perforation was diagnosed, laparotomy performed, and an intestinal perforation the size of a bean sutured, the peritoneum being cleared of a small quantity of fæcal matter. The patient improved considerably, but the temperature rose and remained high, and he collapsed and died ten days after the operation. The cicatrisation of the sutured perforation was complete, but near it were two other recent perforations.

Dr. Lereboullet, on the diagnosis and treatment of intestinal perforations in typhoid fever, confesses himself at one with Dieulafoy on most of the points brought forward. He denies the absolute value of the subnormal temperature as a diagnostic sign, after consulting both his own notes and the best works on the subject. In all his cases, throughout several epidemics, perforation had been accompanied by a rise in temperature. Lorain, Brouardel and Thomot, Griesinger, Amould and Lemoine, Homolle, all look on a rise of temperature as the usual sign of perforation. At the same time, he considers an attentive study of the pulse more suggestive in the precision of the diagnosis. If it increases suddenly in rate, becomes small and irregular, and continues so for several days, there should be little difficulty in distinguishing this from intestinal hæmorrhage. Griesinger, indeed, says that "the conditions of the temperature vary to such an extent that it is of no help towards the diagnosis." Lereboullet considers the low temperature sometimes present

to be due to collapse.

M. Charles Monod quotes a case in which he operated within a few hours of the perforation without success. There was elevation of temperature, the diagnosis, however, being easily made.—A. A. Warden, M.B. Glasg., Paris.

## Books, Pamphlets, &c., Received.

A Collection of the Published Writings of William Withey Gull, Bart., M.D. Edited by T. D. Acland, M.D. Memoir and Addresses. London: The New Sydenham Society. 1896.

Forensic Medicine and Toxicology: a Manual for Students, by C. O. Hawthorne, M.B. Second Edition. Glasgow: A. Stenhouse. 1897. (4s. 6d. net.)

- Ligaments, their Nature and Morphology, by J. Bland Sutton. Second Edition. London: H. K. Lewis. 1897. (4s. 6d.)
- Sight Testing for the G. P., by F. Davidson. London: A. La Rivière. (2s. 6d.)
- A Handbook of the Diseases of the Eye and their Treatment, by Henry R. Swanzy, A.M., M.B. Sixth Edition, with Illustrations. London: H. K. Lewis. 1897. (12s. 6d.)
- An Account of the Life and Works of Dr. Robert Watt, author of the "Bibliotheca Britannica," by James Finlayson, M.D., with a Portrait. London: Smith, Elder & Co. 1897. (3s. 6d.)
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# GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 20th March, 1897.

	Week Ending			
	Feb. 27.	Mar. 6.	Mar. 13.	Mar. 20.
Mean temperature,	46.9	38.8,	41 ·4°	43·3°
Mean range of temperature between day and night, .	9·9°	12·1°	11 <b>·2</b> °	11·5°
Number of days on which rain fell,	7	5	5	7
Amount of rainfall,	1 ·86 in.	0·77 in.	0 <sup>.</sup> 44 in.	1 ·46 in.
Deaths registered,	394	372	354	335
Death-rates	28.7	27.1	25.7	24.4
Zymotic death-rates,	3.8	4.3	3.5	4.8
Pulmonary death-rates, .	11:3	9.6	8.2	6.8
DEATHS — Under 1 year, 60 years and upwards, .	95 75	85 61	80 73	73 52
60 years and upwards, .				
DRATHS FROM— Small-pox,				
Measles,	24	. 18	19	21
Scarlet fever.	4	2	1	2
Diphtheria,	2	3	2	3
Whooping-cough,	19	24	17	24
Fever,		3	3	8
Diarrhœa,	3	9	6	8
Croup and laryngitis, .		5	2	1
Bronchitis, pneumonia, and pleurisy,	128	110	91	80
	<u> </u>			
Cases reported— Small-pox,			•••	
Diphtheria and membranous croup,	14	9	8	9
Erysipelas,	17	14	31	15
Scarlet fever,	62	41	47	58
Typhus fever,			•••	
Enteric fever,	24	20	23	17
Continued fever.			•••	
Puerperal fever,	1	1	2	
Measles.*	364	328	380	294

<sup>\*</sup> Measles is not notifiable.

#### THE

# GLASGOW MEDICAL JOURNAL.

No. V. MAY, 1897.

### ORIGINAL ARTICLES.

ON THE NUMBERS OF THE MEDICAL PRACTITIONERS IN GLASGOW IN THE YEARS 1885 AND 1897 RESPECTIVELY.

By JOHN BROWN, M.D., F.F.P.S.G.

At the beginning of every year the medical journals have generally something to say about the great increase in our numbers, shown by the yearly increase in bulk of the *Medical Directory*. This year is no exception, and the *Lancet* has recently pointed out the fact that while the numbers entering the profession during the past few years have diminished, yet the numbers entering are far ahead of the death-rate. This, of course, deals only with those who qualify in Great Britain and Ireland, but does not localise them further. They may or may not be in practice, or if in practice they may be anywhere outside or inside these limits.

I have thought the numbers of the profession actually in practice in the area of what we know as Greater Glasgow, and compared after an interval of twelve years (1885 and 1897), might be interesting to this Society. These numbers are taken from Churchill's *Medical Directory* and the *Glasgow Post Office Directory* for these years, corrected in every case by my own local knowledge. The *Medical Directory* was found the more useful as it gives a local list, and the *Post Office* 

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<sup>1</sup> Read at a meeting of the Southern Medical Society, 18th March, 1897.

Directory useful in finding those in actual practice. The municipal boundaries of Glasgow were extended in 1891, but the area taken is the same for both years, and includes, outside the present municipal boundaries, Pollokshaws, Kinning Park, Govan, and Partick—that is from Springburn and Maryhill on the north to Pollokshaws on the south, on the east Parkhead, and on the west Whiteinch. It does not include Rutherglen or Cathcart. Of course, the medical practitioners in this area are not limited to this in practice, and, on the other hand, those outside these limits have some practice in it. This latter, however, must be small compared with the former.

In the local list Medical Directory for 1885, under Glasgow there are 388 names; under suburbs, 50; to this there requires to be added 4 omitted from local list—total, 442. number there requires to be deducted five names entered in local list that should not be there, and other five who are entered twice, once under Glasgow, and again in the suburban local list. This brings down the number to 432, and of these 107 were not in practice, leaving a balance of 325. In the 107 are included medical practitioners who act as pure dentists, a member of Parliament and a chemical manufacturer, university professors not in practice and a Free Church minister. young men recently qualified whose home address is in Glasgow but not in practice, and men out of practice through age or who have never practised. I have also eliminated the resident assistants in the Royal and Western Infirmaries. These, no doubt, do their share in the medical work of the city, but only a few register their address at these institutions, and after being once entered as such remain in the Directory for a year or two.

The 325 include all those who do medical work in the city, whether that work be general, special, or consultant. It also includes those who hold salaried appointments, even though the holders are restricted to the duties under which they were appointed, and this is done on the ground that these duties are

part of the medical work of the city.

Of these 325 practitioners resident within the city in 1885, there are only now 212 (1897) of these still in practice. The remainder (113) is accounted for by deaths, removals, and to a slight extent retirals from practice. To put the figures in percentages, 65.23 per cent of those in practice in 1885 are still in practice in 1897, while 34.77 per cent are not now in practice.

Dealing with 1897 in the same way, we find in the *Medical Directory* under Glasgow, 642 names; suburbs, 43—total, 685. The errors of omission and commission exactly balanced one another. In 1885 the number was 432, showing an increase

of 253. In 1897 we have 191 not in practice, as compared with 107 in 1885, an increase of 84. This is probably due to young men finding it difficult to get openings for independent practice. If we deduct the 191 from 685, we have 494 who do the medical work of Greater Glasgow. This is an increase of 109 in the twelve years.

Of these 494 practitioners now resident in Greater Glasgow, only 212 of these were in practice in 1885. The remainder (282) are in place of those removed by death, removals to other spheres of usefulness and retirals, and for attendance on an increased population. As I have already mentioned, 325 practitioners were able to do the work of the city in 1885, and of these 212 remain, and only 113 required to be replaced, whereas we have 282—the balance of 169 should correspond with the increase of population. The increase for the twelve years is estimated at 135,000. This would give to the newcomers an average population to attend to of 799.

To put the matter before you in another way, we can say that of the 494 practitioners now in Glasgow, only 212 (or 42.9 per cent) have been over twelve years in practice in the city, and 282 (or 57 per cent) have been less than that time in the city.

I have to remind you that the 282 only represent those who have come to the city during the last twelve years, and are still here. The number who have come and gone would be difficult to find out.

I am indebted to the medical officers of health for Glasgow and Pollokshaws for the populations during 1885 and 1897. For 1885, 718,000; 1897, 853,000, which, divided by 325 for 1885, gives an average population of 2,209 to every practitioner; and for 1897, divided by 494, gives an average population of 1,726 to every practitioner.

#### MEDICAL PRACTITIONERS IN GREATER GLASGOW.

		1885.	1897.	Increase in Twelve Years.
Medical Practitione	rs in			
Glasgow,		432	685	253
Not in Practice, .	•	107	191	84
In Practice,		325	494	169
Population,		718,000	853,000	135,000
Average Population			-	
each Practitioner	, .	2,209	1,726	•••

Of the 325 practitioners in 1885, 212 are still in practice in 1897, showing a loss by death, &c., of 113, and these have been replaced by 282 new men.

CASES OF CYSTIC DISEASE OF THE KIDNEY, WITH SPECIAL REFERENCE TO THEIR PATHOLOGY, DIAGNOSIS, AND SURGICAL TREATMENT.

By DAVID NEWMAN, M.D., Surgeon, Glasgow Royal Infirmary.

In the larger text-books of surgery cystic formations in the kidney are hardly mentioned, and even in special works on the surgery of the abdominal organs very scant attention is given to the subject. In some of the books devoted to renal surgery, however, short notices are to be found, but these are for the most part brief and unsatisfactory. This neglect on the part of many surgical writers is probably due to the circumstance that the diseases under consideration are frequently overlooked during life, and, until within the last few years, even when they were discovered, the surgeon's aid was not often asked. But now that more attention is being given to the surgical aspects of diseases of the kidney, it is well that these maladies should be taken into account in forming a diagnosis.

Cystic degeneration of the kidney is not only of pathological, but also of clinical importance; it has been confounded with ovarian cyst, and has been removed as such by several well-known surgeons who have had the courage to publish their failures, amongst whom I may mention Peaslee, Esmarch, Campbell, Ollier, Archer, Leopold, Schedé, Keeling, and Goodell; and Wagner has published a case of Thiersch's, in which this disease was mistaken for hydatid of the liver.

In cases of nephrectomy for cystic disease of the kidney which I collected some years ago, in fifteen out of twenty-two cases a mistaken diagnosis was made previous to the operation. This illustrates clearly, I think, the necessity for more attention

being directed to the subject.

Amongst writers on cystic diseases of the kidney there is considerable diversity of opinion, not only as to the lesions which ought to be included under cystic diseases, but also as to the position in which these morbid conditions should be placed in their general classification. Clearly, accumulations of fluid in the pelvis of the kidney should not be included under cystic formations, but the term should be carefully limited to collections of non-inflammatory fluid in the substance or on the surface of the kidney.

As to the position of cystic formations in a general classifica-

tion of diseases of the kidney, it is well to keep them in a category by themselves, and not to include them amongst the tumours properly so called. Most authors, however, include cystic disease amongst tumours, the principal reason for this being the increase in the size of the kidney associated therewith; but when we consider the more minute changes, it will be seen that in retention-cysts the kidney dilates and becomes occupied by numerous excavations bounded by a fibrous tissue envelope, and that the process is due to a retrogressive or destructive, rather than a formative or constructive disturbance of nutrition, such as is seen in neoplasms properly so called.

Cysts of the kidney may be conveniently divided into four

classes-

(a) Simple cysts and cystic degeneration;(b) Those due to the presence of parasites;

(c) Paranephric cysts; and

(d) Those which may be included under the term congenital cysts.

### (a) SIMPLE CYSTS AND CYSTIC DEGENERATION.

1. Simple cysts are very commonly found in kidneys otherwise normal, and their presence does not often interfere with the function of the organs. These simple cysts, which are generally few in number, are of no great clinical importance so long as they remain small in size, as they cause practically no enlargement of the organ; but, when they come to occupy a considerable space they may cause pressure upon the surrounding parts, and lead to more or less disturbance of function and discomfort to the patient. If some of the tubuli uriniferi are closed by deposits or by tube-casts, or occluded by the contraction of connective tissue, changes result—the secretion accumulates behind the obstruction and distends the capsules of the Malpighian bodies or the lumen of the tubules into cysts filled by altered secretion. Their walls are thin, composed of connective tissue, lined with a proper tessellated epithelium, and the cysts may project beyond the surface of the organ. The contents are generally clear, colourless, or of a pale straw colour, and contain more or less albumen; sometimes, however, the fluid is colloid in character. But while solitary cysts are usually filled with such material, in a few instances they have been found to be occupied by a bloodstained fluid or gelatinous matter, and in the contents of some cholesterine has been discovered. These cysts are possibly

congenital in origin, and are likely due to the same causes

which produce general cystic degeneration.

In the Museum of the Glasgow Royal Infirmary there is a specimen of a very large single thin-walled cyst, which projects from the middle of the convex border of the kidney; the cortical substance entirely, and in great part also the pyramidal, has become destroyed, so that the cyst almost extends to the pelvis, yet does not open into it. The two cavities are still separated from one another by a thin wall of renal tissue. On microscopic examination the rest of the kidney proved to be healthy, except where more or less altered by the direct pressure of the cyst.

CASE I.—Single Cyst of the Left Kidney in a Patient who suffered from Chronic Cystitis, and died suddenly from Cardiac Syncope—Presence of Cyst not suspected during

life.

J. G., aged 61, consulted me in 1884 on account of a chronic cystitis from which he had been suffering for many years. His medical attendant told me that the patient for a long time complained of cardiac weakness, and that physical examination of the chest revealed the presence of marked ventricular dilatation and disease of the aortic valves. I saw the patient for the first time he was extremely weak, and suffered severely from frequent and painful micturition; he also complained of pain in the loins, but on examination I failed to discover any abnormality in the renal regions. All the urinary symptoms pointed to chronic cystitis, with hypertrophy of the prostate; albumen was present in the urine, but not more than could be accounted for by the pus; no tube-casts were discovered, nor were any other abnormal constituents found at any time. The patient died within a fortnight of my first seeing him, and at the post-mortem examination the condition of the left kidney was discovered.

The cyst <sup>2</sup> contained 6 oz. of colourless fluid; its wall was very thin and translucent, and to the naked eye appeared as if formed of the capsule only; but, on more careful examination, the capsule was found to be separable from the proper cyst wall. The pressure of the cyst-contents caused a deep depression on the convex aspect of the kidney, but otherwise

the kidney was normal.

<sup>&</sup>lt;sup>1</sup> Series VII, No. 71, Catalogue of the Pathological Museum, third edition.

<sup>&</sup>lt;sup>2</sup> Series VII, No. 75, Catalogue of the Pathological Museum, third edition.

CASE II.—Large Simple Peripheral Cyst of the Left Kidney, which caused Pressure Symptoms, but no Urinary Disturbance—Operation—Cure.

G. W., aged 49, an ironworker, was sent to me by Dr. James Laurence, of Cumnock. He complained of pain in the left lumbar region, which was occasionally severe when he overexerted himself; but generally it was dull, and sometimes only amounted to a sense of weight in the affected side. The pain was always limited to the renal region; but, from the constant discomfort he was subjected to, the patient was anxious for relief.

He was first examined by me at the Western Infirmary in May, 1888, when I found the abdominal walls rather flaccid, except in the left lumbar region, where there was a distinct swelling, fluctuant and dull on percussion, and on the anterior aspect of the swelling there was a circumscribed hard mass, which was movable. There were no urinary symptoms at any time, and the only complaints the patient made beyond the local pain were sickness after taking food, weakness, and inability to do his work. The physical signs were those of hydronephrosis, except that the swelling never varied in size, and the urine was regular in quantity and normal in character. The swelling was about the size of a large cocoa-nut. I made a lumbar incision, and found the posterior aspect of the kidney occupied by a large single cyst, which pushed the organ forward. The wall of the cyst was thin and projected considerably beyond the surface of the kidney, and from the pressure of the cyst-contents the posterior aspect of the kidney was deeply concave, so that the deepest part extended to the pelvis, but did not open into it. The fluid (251 oz.) was clear, of a pale straw colour, and contained a trace of albumen and of urea, and a few crystals of cholesterine.

After opening the cyst the kidney was fixed to the parietes, and the patient made a good recovery, and was soon able to follow his usual occupation.

These simple cysts are occasionally found in kidneys otherwise normal, and may be regarded as pathological curiosities, as they seldom attain the size described above, nor do they often give rise to symptoms so severe as to demand operation. They rarely interfere with the function of the kidney, and, unless of considerable size, are not discovered during life, and hence rarely call for the intervention of the surgeon. I did not explore with a trocar, as it is a mode of treatment not free from danger in hydronephrosis; and further, before the operation I was not certain that the cyst was a simple one.

2. General Cystic Degeneration of the Kidney.—In place of being occupied by a few small cysts, or by one large cyst as in the cases just described, the whole kidney may be converted into a huge conglomeration of cysts of varying sizes and colour, and so closely packed together that with the naked eye it is impossible to detect a trace of renal tissue; but even although the organ is increased to ten or twenty times its normal bulk, its renal form is maintained by the enlarged mass. The degeneration generally affects both organs, although perhaps not to the same extent, and is not uncommonly associated with the formation of cysts in the liver and thyroid gland. The kidneys may not attain such dimensions as to be easily detected during life, unless carefully looked for; while, on the other hand, a case has been recorded in which the organ so increased in bulk as to weigh 16 lb., and measured 151 inches in length.

This very unusual case was published by Dr. Hare in the Pathological Transactions for 1850-51. A somewhat smaller specimen is in the Royal Infirmary Museum. It was removed from the body of a man aged 60. During life no renal disease was suspected, but after death both the kidneys were found to be the seat of cystic degeneration. In the specimen (the right kidney when removed from the body weighed 84 oz.), the smaller cysts were filled with firm gelatinous material,

while the contents of the larger were fluid and clear.

CASE III.—Severe Renal Pain, Nausea, Vomiting, and rapid Emaciation; also Symptoms of Transitory Hydronephrosis following a Natural Labour—Physical Signs of Movable Cystic Kidney—Operation followed by considerable relief.

Mrs. M'N., aged 30, was sent by Dr. Beveridge, of Hurlford, and admitted to the Glasgow Royal Infirmary, 24th November, 1896, complaining of pain in the abdomen and in the right loin, with rigors and painful micturition following a natural labour.

She was the mother of five children, and after the birth of the last child she had rigors three days in succession, and within a few days thereafter she began to experience more or less pain on micturition, which was followed by severe sickening pain in the abdomen and in the right loin; this pain was only present when the patient moved about or when the kidney became displaced; while resting in bed the pain was never very severe. It was constant in situation and aggravated by pressure. Since the onset of the pain she had become progressively weaker, and on admission she also

complained of loss of appetite, flatulence, and constant nausea on taking food. The patient said that during the last three months she had lost considerably in weight.

The bowels have been as a rule constipated, the tongue furred, the patient sweats very much at night, and, with the exception of three days, she has been unable to be out of bed since her confinement.

The temperature from the 24th November to the 7th December was between the normal line and 100.2° F.; of fourteen evening temperatures, eight were up to or above 100° F., the morning temperatures were about 99° F. She never noticed any abnormality in the urine, except that the quantity was large and she had to pass water very often, and has had to do so for some years. When the pain in the kidney was severe, occasionally, very soon after the bladder was emptied she found it suddenly distended again, and when this occurred it was always followed by relief of the pain, but a swelling present in the loin did not on any occasion disappear. There was no history of hæmaturia at any time. From the 27th November till the 5th December the quantity of urine varied from 1,320 to 2,624 c.c., and on standing for twelve hours a deposit amounting to from 30 to 50 c.c. was thrown The urine was of a pale straw colour, its specific gravity 1008 to 1010, and on one occasion 1020. urine contained a trace of albumen, and the deposit consisted almost entirely of mucus, urates of soda, with a few leucocytes and epithelium, but, after repeated examinations, no tube-casts or tubercular bacilli were discovered.

Physical Examination of the Abdomen.—The patient was very pale and anæmic, emaciated, and the abdominal wall was lax; the hepatic, splenic, and stomach percussions were normal; in the right loin there was a distinct hard nonfluctuant swelling, rounded but irregular on the surface, and when pressed upon it was easily moved towards the middle The swelling extended under the anterior margin of the liver and downwards as far as the crest of the ileum, and while the patient was lying upon her back and the swelling occupied the loin, the inner margin of the mass was felt with the hand to extend within 4 in. of the middle line in front. The size of the swelling as detected by palpation did not correspond to the dull area; on percussion, the anterior margin of the swelling gave a clear rather than a dull note. Percussion over the swelling in the loin was dull, but on passing forwards a resonant note was obtained even where the enlarged kidney could be clearly made out with the

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hand; the percussion of the upper limit of the swelling was obscured by the liver, and the lower margin by the ilium. On palpating the kidney it could be easily pushed out of its position in the right loin, but when it was pressed over the middle line, or when it assumed the same position on movement of the patient, severe sickening pain was brought on, and if the organ was not replaced soon nausea set in. There was no enlargement of the left kidney. The bladder on examination was found to be healthy, and there was nothing abnormal in any of the other abdominal organs. The lungs were practically normal; there was evidence, however, of slight hypertrophy of the heart, although no increased arterial tension could be made out.

The facts, then, which we had to deal with were briefly these:—the history of sudden onset of pain in the right lumbar region, with rigors and painful micturition following a natural labour, but without pyuria or much elevation of temperature; pain constant in situation and coincident with a rounded but irregular non-fluctuant renal swelling, which was freely movable; pain aggravated by pressure or by displacement of the right kidney. The patient suffered from night sweats, constipation, flatulence, and almost constant nausea, and was rapidly emaciating. The case was clearly not one of abscess, pyonephrosis, or tubercular disease. The absence of any marked elevation of temperature and of pyuria, together with the fact of the swelling being non-fluctuant, dismissed the possibility of any of these diseases. Therefore the only conditions which remained to be disposed of were cystic degeneration and tumour of the kidney, or these conditions combined with some hydronephrosis. The physical characters of the swelling-viz., its large size, rounded contour, nodulated surface, and firm consistence—pointed to a kidney having undergone cystic degeneration, and probably the onset of the pain was accounted for by the enlarged kidney becoming movable after delivery; but the circumstance that the bladder was occasionally suddenly filled after evacuation, and that this was followed by relief of pain, pointed to some distension of the pelvis of the kidney, probably a transitory hydronephrosis from some obstruction in the ureter. The diagnosis between renal tumour and cystic degeneration was based upon the character of the pain and the absence of hæmaturia; the only tumours that were likely to attain a size sufficient to explain the enlargement of the kidney were sarcoma or cancer, and in either of these instances before the organ had increased to its present dimensions severe hæmaturia would probably

have occurred. Although rarely severe in the early stages of malignant disease, hæmaturia is almost constantly present in the later stages, and is then generally very profuse; and when the hæmorrhage has commenced it is more profuse and less transient than when due to other causes. It is generally spontaneous and continuous, although at intervals liable to aggravation. The pain, also, in tumour is different from what was found in this case. In malignant disease the pain is constantly present and not relieved by or aggravated with movement of the body, and before the tumour has attained the size of the swelling in this case the suffering becomes intense, and is not limited to the lumbar region or hypogastrium of the affected side, but generally extends to the chest, across the middle line, or to the hip and lower extremities.

I therefore came the conclusion that we had to deal with a case of cystic degeneration of the kidney, associated with transitory hydronephrosis. On the 7th December, 1896, the kidney was exposed by a lumbar incision, and on opening the adipose capsule the cortex of the kidney was seen to be occupied by numerous cysts of various sizes. The organ was greatly enlarged, so that the pelvis of the kidney could not be explored with the finger through the wound. The adipose capsule was freely separated from the surface of the kidney, and a considerable portion of it removed; the organ was then sutured to the parietes.

The patient made a rapid recovery, and since the operation the swelling has diminished in size, partly accounted for by the removal of the adipose capsule, and probably also by the disappearance of the pelvic distension present previous to the operation. The patient was dismissed on the 12th January, and she reported herself on the 11th March. She then said that since the operation she has suffered very little from pain in the abdomen, but that she occasionally still complains of flatulence and indigestion. There were no indications of retention of urine in the renal pelvis since the operation, and the pain in the lumbar region had subsided.

CASE IV.—Cystic Degeneration of both Kidneys—Persistent Renal Pain, Anomia, and Emaciation—Homaturia from Left Kidney only—Albuminuria, Granular and Hyaline Tube-casts—Physical Signs of Cystic Kidney on both sides—Hypertrophy of the Heart—Death after Five Years from Uromia.

W. K., a male, aged 46 years, consulted me in 1881, when

he complained of pain in both loins, from which he had been suffering for the previous eighteen months. At the time I saw him first he complained of loss of appetite, and occasional nausea after taking food, also headaches and giddiness; but what alarmed him most was the persistent renal pain and hæmaturia. The latter symptom had been present for seven months. At first the quantity of blood was small in amount, being only sufficient to tinge the urine, and when the urine was allowed to stand a red deposit was thrown down, which did not amount to more than from a half to one per cent in volume. When the patient had been under observation for some time I made a careful examination of the urine, in order to determine the relative proportion between the amount of hæmoglobin and the quantity of albumen present in the urine, with the following results:—

TABLE SHOWING ANALYSIS OF THE URINE ON VARIOUS OCCASIONS, WITH SPECIAL REFERENCE TO THE AMOUNTS OF HÆMOGLOBIN AND ALBUMEN.<sup>1</sup>

		DATE				Quantity of Hæmoglobin.	Quantity of Albumen.	Specific Gravity.	Quantity of Urine in Twenty-four Hours.
						Per cent.	Per cent.		Oz.
1881-	-June	7,		•		0.101	0.237	1011	60
,,	,,	8,				0.097	0.318	1010	62
,,,	,,	9,				0.072	0.201	1018	31
,,	Aug.	20,				0.123	0.310	1018	32
,,	,,	21,				0.124	0.379	1016	76
,,	"	22,				0.017	0.147	1005	78
,,	Dec.	5,				0.071	0.239	1005	78
",	•••	6,				0.092	0.210	1003	100
	"	8,			•	0.100	0.307	1010	70
1882-		11,				0.131	0.370	1018	34
,,	,,	13,				0.127	0.206	1010	50
",	"	17,		•	·	0.130	0.179	1018	31
Avera	ge of 1	l2 ex	amin	ation	8, .	0.099	0:358	1010	58

When albuminuria is due simply to the presence of blood, the ratio of albumen to hæmoglobin is as 1 is to 1.6. As shown by the above table, in this case the amount of albumen was relatively greater, namely, as 358 is to 99; or, to state it more simply, as 3.6 is to 1—that is to say, the whole of the

<sup>&</sup>lt;sup>1</sup> For method of examination, see Newman's Surgical Diseases of the Kidney, p. 82.

albumen present in the urine was not accounted for by the presence of blood; indeed, not more than a fifth part of it could be properly attributed to the hæmaturia. Repeated microscopic examinations of the urine failed to show the presence of blood-casts, but on almost all occasions finely granular and hyaline tube-casts were found, together with free blood corpuscles, a few leucocytes, and some epithelial cells.

The urine from both ureters was examined separately at three different times, and it is a fact worthy of note that, while on all occasions that from the left kidney contained blood, the urine from the right kidney was free from it.

DURING 1884.—EXAMINATION OF THE URINE FROM THE TWO-URETERS SEPARATELY.<sup>1</sup>

	Right.	Lept.
Appearance,	Pale straw-colour, clear; on standing for eight hours slight deposit of epithelium, and a little mucus.	
Hæmoglobin, Reaction,	None.	l in 6,000. Neutral. Larger in amount than
Tube-casts,	Hyaline and granular.	from right kidney. Hyaline and granular.
Microscopic examination,	Slight deposit of epi- thelium and mucus, a few tube-casts, no blood or pus.	right kidney, with red

Physical Examination.—The patient was emaciated and very anæmic. The hepatic dulness and stomach resonance were normal. The spleen was slightly enlarged.

In both loins there was a non-fluctuant swelling, rounded, slightly irregular on the surface, and when a little pressure was employed the patient complained of considerable pain, Percussion over the swellings was dull, except at the anterior margin, where a resonant note was obtained, even where a feeling of undue resistance was evident to the finger. An area of diminished resonance gradually passed into that of the renal dull area, so that it was not possible to fix any clear-

<sup>&</sup>lt;sup>1</sup> Silbermann's method of compressing the ureters was employed.

line limiting the anterior margins of the renal swelling. On the right side the percussion of the upper limits of the enlarged kidney was obscured by the hepatic dulness, although the margin could be easily felt on palpation; the right kidney was slightly movable. On the left side the splenic percussion interfered with that of the kidney.

By palpating deeply, the limits of both kidneys could be more clearly made out than by percussion. The right kidney occupied the whole space between the lower margin of the liver and the crest of the ilium, and extended outwards 4½ inches from the vertebral column when the patient was lying on his face. The left kidney was a little smaller.

During the time the patient was under observation the kidneys slowly but steadily increased in size, and at no time either suddenly increased or diminished, even although the

quantity of urine varied greatly in amount.

Examination of the chest revealed emphysema of both lungs and hypostatic hyperæmia of the bases, also some chronic bronchitis, and hypertrophy of the heart without any valvular lesion. The second sound was clear and slightly accentuated; there was no murmur, but the sphygmograph showed increased arterial tension.

On account of the severe pain the patient was anxious to have an operation performed, but seeing that in such a case of cystic degeneration surgical interference could do little good, I advised him to go to the Royal Infirmary, where he remained for six weeks, and improved a little during his residence there. I saw him on many occasions at considerable intervals, and found that the symptoms varied greatly from time to time. Sometimes he enjoyed comparatively good health, while at others he was extremely feeble, sick, and quite unable to take food. He lingered on until November, 1886, when he died with symptoms of uræmic poisoning.

A post-mortem examination, made on the 10th November, 1886, showed the heart to be greatly hypertrophied (23 oz.), without valvular disease; hypostatic hyperæmia, emphysema, and chronic bronchitis in both lungs; nutmeg liver, passive hyperæmia of the spleen; ascites (15 oz. of serum). "The kidneys weighed 28 oz., and are both converted into a large conglomeration of cysts of varying size and colour, and so closely packed together that it is difficult to detect any renal tissue with the naked eye, although with the microscope abundance of tubules and glomeruli can be seen. In both kidneys there is also evidence of chronic tubular and interstitial nephritis. The only difference between the right

kidney and the left one is, that whereas the latter is somewhat the larger, the cysts in the former are not so numerous, and are more deeply pigmented."

The specimen is in the Royal Infirmary Museum, Series VII,

No. 89.

CASE V.—Dull Pain in Right Loin for Twenty Years— Occasionally Severe Renal Colic—Nausea—Loss of Appetite —Emaciation—Intermittent Pyuria and Albuminuria— Physical Signs of Cystic Degeneration of the Kidney on Right

Side only—Exploratory Operation.

On the 11th September, 1896, I was asked by Dr. Andrew Richmond, of Paisley, to see a patient who complained of pain in the right loin, from which she had suffered more or less for twenty years. She had dull aching pain in the lumbar region, which was almost constantly present; but besides this dull pain she had occasionally more severe attacks of suffering, the last of which occurred in August. This pain was very severe and accompanied by loss of appetite, flatulence, irregularity of the bowels, and nausea. She was also troubled with headaches and giddiness. Dr. Richmond attended the patient during several of these acute attacks, and he observed that the urine contained a considerable quantity of albumen when the pain in the side was severe and the swelling more marked, while in the intervals between the attacks it was quite free from abnormality. No blood was observed by Dr. Richmond nor by any of those in attendance, nor were tube-casts found in the urine.

When I examined the patient on the 11th September she was very anæmic and much emaciated, and the skin and conjunctivæ were unduly yellow; the pulse soft and weak; temperature, 98° to 101° F. The thoracic organs were normal; no hypertrophy of the heart. The hepatic dulness was slightly increased, and the stomach resonance extended over a much larger area than normal. The spleen was slightly enlarged.

In the right loin there was a rounded non-fluctuant smooth swelling, pressure on which produced some but not considerable pain. The swelling was found to be slightly movable; percussion over it was dull, and the dull area occupied the space between the ribs and the crest of the ilium, and extending to within 3½ inches of the middle line. The size of the swelling as detected by palpation did not exactly correspond to the dull area on percussion, the anterior margin of the swelling giving a clear rather than a dull note. The limit of dulness was not

very sharply defined, the resonance gradually tapering away from the tympanitic intestinal note to the dull renal area. By palpation the swelling could be very clearly limited on the right side, while, on account of the emaciated condition of the patient and the looseness of the abdominal walls, the left kidney could be felt easily and recognised to be normal in size, and it at no time caused trouble, nor had it been enlarged.

The urine passed on the 11th and 12th September was found to be of a light straw colour. Specific gravity, 1015 to 1018; urea, 18 to 2.1 per cent (after the albumen was separated by boiling); reaction acid. Pus and albumen were present, the latter being larger in amount than could be accounted for by the former. No renal tube-casts or other deposit. The pus varied considerably from day to day, and the quantity of albumen also altered, but not in any ratio to the pus present.

The family history obtained from her doctor was:—"Both parents enjoyed good health, but unable to ascertain the cause of death. The patient's eldest daughter suffered from a renal swelling, which was operated upon successfully, and proved to be a cystic kidney with a pyonephrosis. Two members of her family died when young from nephritis (post-scarlatinal), and another member of the family, although apparently in perfect health when examined for life insurance, was found to have a good quantity of albumen in his urine, but ultimately it cleared away, and has not returned.

"Another daughter consulted me regarding a swelling on the left side, which was suspected to be spleen, but in reality

is more probably an enlarged kidney." 1

The facts then were:—The history of an old-standing renal pain with sudden exacerbations resembling renal colic, associated with the appearance of albumen in the urine, and later on with pus, both of which were intermittent, disappearing completely between the attacks. Added to these symptoms we had the presence of a persistent rounded swelling in the right loin, undoubtedly of renal origin. There were none of the more usual symptoms of chronic nephritis as met with in cases of cystic degeneration, viz., hypertrophy of the heart, increased arterial tension, uræmic symptoms, disturbance of vision, diminution in the quantity of urea or other urinary ingredients, nor could tube-casts and renal epithelium be

¹ Dr. Richmond asked me to examine this patient, whom I found to be the subject of cystic degeneration of the left kidney. The physical signs were characteristic, but beyond the discomfort arising from the increase in the size of the kidney she did not complain of any symptoms.

discovered in the urine. Albumen was present during the attacks, and was in excess of what might be due to the pus.

The persistent renal swelling was the most important objective sign of disease. To what condition of the kidney was it due?

Swelling in the renal region may be caused by hydronephrosis, pyonephrosis, cystic degeneration, abscess or tubercular disease

of the kidney, and simple or malignant neoplasms.

The fact that the symptoms had extended over a very long period excluded most of those conditions, and practically limited the diagnosis to hydronephrosis, pyonephrosis, or cystic degeneration, and the swelling being non-fluctuant dismissed the idea of any large fluid accumulation. The family history showed that a daughter had been operated upon for a combination of cystic disease with pyonephrosis. Had we then another example of the same condition?

In advanced cystic disease the symptoms are seldom pronounced—indeed, beyond swelling in the loins, they are those of chronic Bright's disease—but in this case the swelling was only in one loin, and the patient suffered from none of the more serious symptoms of chronic nephritis. The anæmia, the great derangement of the digestive organs, the general weakness, and the occasional albuminuria were probably, however, the precursors of graver symptoms, and were of themselves sufficient to threaten the life of the patient, while the appearance of considerable quantities of pus in the urine seriously complicated the case.

In this case catheterisation of the ureters was considered inadvisable on account of the great general weakness of the

patient and the acute nature of the attack.

The question of making an exploratory incision was carefully considered, and it was resolved to wait the course of events. During the third and fourth weeks of September the patient's condition improved somewhat, but during all that time considerable but varying amounts of pus and albumen were present in the urine. At the beginning of October, the patient had a very acute attack, and suffered greatly from the symptoms described above, and in an aggravated form. She was very prostrate when I saw her on the 7th of October, and she had practically retained no food for three or four days. The swelling in the right loin had apparently increased in size, and the feeling of resistance was more distinct than formerly. The temperature was 98.4° to 101.2°; pulse, very weak, 96; respirations, 20.

Considering all the facts of the case, I felt justified in No. 5.

recommending an incision. The swelling in the loin had increased, the quantity of pus in the urine augmented, and the symptoms aggravated, and unless some relief was found it was evident that the patient's life was in imminent danger from exhaustion.

On the 8th October, the right kidney was rapidly cut down on by lumbar incision, exposed, and its substance found to be

occupied by large numbers of small and large cysts,

On exploring the pelvis with an aspirator needle only a small quantity of pus was withdrawn, showing that the pus was formed in the pelvis, but was not retained there. In view of the cystic degeneration of the kidney I did not consider it advisable to explore the kidney further. The wound healed in three days, but the vomiting and sickness continued persistently after the operation, and the patient died from exhaustion on the fifth day.

(To be continued.)

### SOME CASES OF HEPATIC SURGERY.

By JOHN O'CONOR, M.A., M.D., B.Ch., T.C.D., Senior Medical Officer, British Hospital, Buenos Ayres.

CASE I. Liver Abscess—Recovery.—J. S., aged 38, labourer, was admitted into the British Hospital on 15th October, 1892. For the previous six weeks he had suffered from nocturnal fever, occasional shivering fits, loss of flesh, sweats, and a constant pain in right subcostal region, with occasional stabbing pain near inferior angle of scapula.

On examination, a slight fulness was visible below right costal recession; on palpation there was marked tenderness, with fluctuation and downward inspiratory movement; and on percussion there was absolute dulness. Temperature, evening of admission, was 102.6°; tongue furred, much thirst,

and profuse perspiration.

On the following morning chloroform was administered, and a 2 inch incision made over swelling. On opening the peritoneum, as the liver was found adherent, a director was pushed into liver substance, at a depth of a quarter of an inch, an abscess was struck, and pus escaped along groove in instrument; the opening was further enlarged by Hilton's method, and two pints of grumous pus evacuated, a large drainage tube

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was then inserted, and cavity irrigated with warm Condy's lotion.

By the third evening constitutional symptoms had disappeared, and he was discharged cured on the forty-first day. He has frequently reported himself during the past four years, and remains in normal health.

He suffered from enteric and dysentery in 1891. No history of malaria.

CASE II. Liver Abscess—Empyema—Trans-thoracic Hepatotomy—Death.—G. N., aged 21, mechanic, was admitted into hospital on 10th August, 1893, complaining of cough, dyspnea, and severe pain in right side of thorax.

Past history excellent, excepting enteric in 1892. Three weeks before admission he had to stop work owing to pain, rigors, sweats, and fever; a week later he developed a most incessant cough, accompanied by a large quantity of offensive

sputum.

On examination after admission, patient had a very anxious look, bathed in perspiration, tongue furred and dry; temperature, 103.4°; pulse, 120; respiration, 40. Constant cough, with most fœtid purulent expectoration; he lay on his right side, the least movement causing alarming dyspnæa. The right side of thorax did not expand on inspiration, and intercostal fulness was visible from third rib downwards. There was absolute dulness extending anteriorly from third costal cartilage to umbilicus, and in axillary line almost to the level of iliac crest.

On auscultation there was absence of breath sounds below third space. Bronchophony and pectoriloquy were well marked. Patient complained very much of tenderness on percussion, and there was absence of tactile fremitus. The liver was felt enlarged down to level of inter-tubercular plane, but no fluctuation could be detected below ribs. During the following twenty-four hours he had several rigors, and temperature,

evening of admission, was 105.4°.

On the 12th August an aspirating needle was inserted into right pleural cavity, and a few drachms of chocolate-coloured pus drawn off. Chloroform was immediately given; 3½ inches of sixth rib were excised in axillary line, and about four pints of the most horrible smelling pus evacuated from pleural cavity. The diaphragm was found pushed upwards by a tense fluctuating swelling. A careful search was made for an opening in it, but none found. The diaphragmatic pleura and diaphragm were next incised, and as the liver was found

adherent, a large curved trocar was inserted, and six pints of grumous pus removed; a large drainage-tube was placed in hepatic cavity, and no sutures were introduced into external wound.

First evening, temperature, 101.2°; breathing greatly relieved, cough considerably diminished. After this the abscess cavity was irrigated twice daily, and by the tenth day all symptoms of septicæmia had vanished; temperature remained at normal; no pus from cavity in liver, and only a slight serous discharge from pleura; cough and expectoration ceased. There was nothing to record for the following twenty days: patient ate well, rapidly gained weight and strength, and was allowed out of bed.

On 10th September, temperature went suddenly up to 102.5°; a large leaden probe was immediately passed into liver sinus; it was found patent, contained no pus, and had contracted considerably. The probe was then moved freely about in pleural cavity, some adhesions were broken down, but nothing was found to account for temperature. the night patient had a rigor, and on the following morning, as the temperature was 100°, the same searching process was repeated, and an inspirating needle was inserted into liver at five different spots, but no pus was struck. On 12th September, about a tablespoonful of pus was noticed in dressings, the pleural cavity was again examined, and aspirating needle again made use of, but all in vain. Constitutional symptoms gradually returned, a few drachms of pus were noted on each dressing; many were the searches made, but septicæmia ended what at one time appeared to be a most promising case, on the 20th of October.

Post-mortem.—A healthy granulating sinus was found passing obliquely downwards from upper border to centre of liver substance; this was all that remained of the large cavity out of which six pints of pus were evacuated. Three inches internal to this sinus a small abscess was found containing 2 oz. of pus; this was quite superficially located in upper border of liver beneath the sixth chondro-sternal articulation; from this a small sinus passed through diaphragm and opened into anterior mediastinum, where a localised collection of some 3 oz. of pus was discovered, and this in turn communicated by a small opening, about diameter of a cedar pencil, with the right pleural cavity, and around this aperture a few drops of pus were seen. There was no trace of any communication between the small abscess cavity and the healthy granulating sinus. I have probably exceeded the space limited in describing

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this case, but the post-operative history may be as interesting

to some as it was disappointing to me.

The circuitous manner in which this small liver abscess communicated with the pleural cavity is instructive, and moreover this case only too plainly demonstrates the fact that, even after successfully striking an enormous hepatic abscess. a satellite much more deadly may be in existence. And a point worthy of note is the unreliability of an aspirating needle in searching for a small abscess; indeed, in such a case the moral is obvious—if the needle fails, don't let the patient die without having resort to a knife and bone forceps.

CASE III. Liver Abscess — Trans-thoracic Hepatotomy— Recovery.—S. J., aged 37, sailor, was admitted on 2nd June, 1893, complaining of pain in abdomen, diarrhoea, and fever.

Ten days before admission, he stated that he was suddenly seized with cramps and diarrhoea, unaccompanied by rigors or sweats. History of dysentery ten years ago; never had malaria or enteric.

On admission, temperature was 100.6°; tongue furred in centre; he complained of headache, pains in back and legs; there was a marked gurgling and tenderness all over abdomen, no rose spots, no enlargement of liver or spleen, and other organs were normal. With these symptoms and the history of onset, enteric was diagnosed, he was placed on the usual milk diet, and a mixture of quinine and chlorine ordered.

During the following four weeks nothing occurred to alter the diagnosis. Temperature ranged from 100° in the morning to 103° at night, no sweats or rigors; the diarrhea, which he had for some days after admission ceased, and was succeeded by constipation. The liver and spleen were percussed and palpated twice weekly, but no enlargement or particular

tenderness was noted. On 1st July, the night nurse reported the patient perspired

profusely during the night, and as nocturnal temperature did not show any tendency to diminish, tubercular ulceration of intestines was suspected. The night sweats continued; and frequently during the month of July the lungs were examined, but nothing abnormal found. On the 28th July, he for the first time complained of a dull pain in right scapular region; as the pain was increased on deep inspiration, pleurisy (tubercular) was suspected, but on examination no evidence of it could be elicited, nor could any appreciable enlargement of liver be detected.

On 14th August he was extremely despondent, very emaci-

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ated, tongue like a raw beefsteak, sweating continuously; a short hacking cough had been noticed for a few days, and on examination on this date, marked tenderness was for the first time noted in the ninth intercostal space, a little in front

of axillary line.

At last it dawned on me to explore the liver; a long hypodermic needle was inserted at tender spot, and indeed it had not to travel far until I found it free in a cavity, and a few drops of grumous pus were withdrawn. The needle was left in situ, and then and there I entered a straight sharp-pointed bistoury alongside the needle into abscess cavity; the needle was withdrawn, and a closed sinus forceps was pushed in along blade of knife; when the end of the forceps was felt free in cavity, the knife was withdrawn, the blades of forceps forcibly dilated, and 8 oz. of pus evacuated; a medium sized drainage-tube was then passed into abscess cavity, and the latter irrigated with warm Condy, until the fluid returned clear. A rapid convalescence ensued, and he was discharged cured on 28th September. A month later he reported himself as fit to resume his work as boatswain.

The manner in which this abscess was opened may appear somewhat rash, but the patient was in such a low state that it was questionable if he would survive an anæsthetic. Anyhow, my feelings can be better imagined than described when I saw pus in the hypodermic syringe, for, through my faulty powers of diagnosis, a fine fellow was kept ten weeks in hospital, treated for typhoid, suspected of tubercule, and reduced to a skeleton. In excuse, it may be said that without rigors, and no perceptible increase in liver dulness, abscess was unlikely. Yet I confess I did not pay as much attention as I should have to the pain, and as hepatic abscess was not suspected I did not make any careful searches for a tender spot in the right intercostal spaces. This case was a lesson to me, and I hope it will be a guide to others, particularly in a country like this, where enteric is practically endemic.

CASE IV. Liver Abscess—Caliotomy—Recovery.—P. B., aged 40, labourer, admitted 13th April, 1894, suffering from an ill-defined, tender, fluctuating swelling in right hypochondrium. About four weeks before, he noticed some pain in this region, gradually lost flesh, had occasional fever, and some shivering fits.

On admission, temperature was 101.8°; tongue furred; pulse, 100; on percussion, dulness over swelling was continuous with that of liver, and with inspiration downward movement was

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distinctly felt. Chloroform was administered on the following morning, and assisted by my colleague, Dr. Shadbolt, a 2 inch vertical incision was made over site of maximum bulging; as the liver was found adherent to parietal peritoneum, a closed sinus forceps was inserted, blades dilated, and 24 oz. of pus evacuated, a large drainage-tube was introduced, and cavity irrigated with Condy. He was discharged cured on 11th May, and has continued since in good health. History of dysentery four years before.

CASE V. Hydatid Cyst of Liver—Cæliotomy—Recovery.—J. D., schoolboy, aged 10, was admitted on 3rd December, 1894, suffering from an enormous hydatid cyst of liver, which occupied almost the whole abdominal cavity. The size of the tumour was very graphically described by the head surgical nurse, Miss Taylor, who said, "You cannot see his face if you stand a few feet from the foot of the bed."

The boy was emaciated; apex beat displaced upwards, respiration altogether thoracic and hurried, pulse small and weak. Temperature and urine normal. On percussing abdomen no tympanitic note could be found, fluctuation was very distinct, and the abdomen was greatly distended—in fact, he

was all belly.

On 5th December chloroform was very cautiously administered by the anæsthetist, Mr. Luck, a 3 inch incision was made in right semilunar line; as no adhesions existed between cyst and parietal peritoneum, a medium-sized trocar was inserted, and 10 pints of clear hydatid fluid removed. Marsupialisation having been performed in the usual manner, the cavity was irrigated, and the largest endocyst I have ever seen evacuated. No untoward symptoms appeared until the fourteenth day, when he developed a sharp attack of measles; a fortnight later some bile was noticed in the dressings. This gradually increased in quantity, until 3 or 4 oz. per diem were passed. After a month the biliary fistula closed, he rapidly began to pick up, and was discharged cured on the sixty-sixth day. His mother quite recently reported that the lad was in excellent health.

I wish to call particular attention to the dangerous and useless practice adopted by some surgeons, of introducing sutures through parietes and cyst wall, before the latter is at anyrate partially emptied. The cyst walls are so extremely thin and tense that it is futile to attempt inserting fixation sutures without entering the cyst cavity. In the above case I attempted this manœuvre, with the result that at each needle

puncture a continuous jet of fluid took place; unfortunately, I was unprepared for the mishap, and before I could help myself, some fluid had entered peritoneal cavity; luckily no bad results followed. The tension inside these cysts is so great that liquid will escape through the punctures of the finest needle. In two of my cases, in which hydatid toxæmia followed aspiration, there can be no doubt that it was not the presence of the needle in cyst that caused it, but the escape of hydatid fluid through puncture into a serous cavity, where I presume the poison was elaborated and rapidly absorbed into the system.

I have never yet introduced into an hydatid cyst in an open wound a trocar, hook, or needle without seeing an escape of fluid; this is bad enough in a patent incision, but infinitely worse in a diagnostic puncture. I always empty those cysts through a medium-sized aspirating trocar and cannula, taking care before doing so to have the peritoneal cavity well shut off with sponges; when the tension is relieved the cyst is seized by hooks, drawn to the surface, trocar opening enlarged, sponges renewed, and cyst fixed to parietal wound by sutures. In carrying out the last step of the operation the parietal peritoneum is ignored, except at upper and lower angles; my object being to bring about union between cyst wall and the broad fibrous surfaces of the incision.

CASE VI. Hydatid Tumour of Liver — Trans-thoracic Operation—Recovery.—A. D., aged 25, married woman, was admitted on 3rd February, 1895. Patient was kindly transferred to my care by my colleague, Dr. Petty, with the diagnosis of a large hydatid tumour having its origin in upper part of liver.

Examination.—Temperature and pulse normal, respiration hurried on exertion, slight cough without sputum. She complained of a dull pain in right side of chest, which she had noticed gradually increasing for the past six months. On percussion there was dulness extending from lower border of second right costal cartilage to subcostal plane. In the axillary line the dull area was about the same in extent. No air could be heard entering right lung anteriorly, but posteriorly breath sounds were distinctly audible.

On 5th February, assisted by my colleagues, Drs. Shadbolt, Petty, and Cruikshank, an aspirating needle was inserted in fourth intercostal space, a little in front of axillary line, and a few drops of clear liquid drawn off. Chloroform was at once administered, and 3 inches of fourth rib resected. When the

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costal pleura was opened, the diaphragm was found pushed considerably upwards, and on palpation a tense cyst was felt beneath it. The diaphragmatic pleura and diaphragm were then incised for about 2 inches, and a white non-adherent cyst presented. A medium-sized curved trocar was inserted into cyst, and about 5 pints of clear hydatid fluid drawn off. When the walls of cyst were sufficiently lax the edges of trocar opening were seized by two sharp hooks, and the presenting portion of cyst wall drawn through diaphragm and sutured to parietal wound. A large drainage-tube was inserted and cavity irrigated with Condy, but no endocyst appeared. The remaining portion of external incision was closed by interrupted silk sutures.

There is nothing to record in the convalescence excepting a nightly rise of temperature, and the dressings had to be changed

three times daily, as suppuration was profuse.

On 28th March, during irrigation, the collapsed endocyst appeared, and was delivered by the aid of a pair of pressure forceps. After this the cavity rapidly contracted, and she left hospital cured five weeks later. During the past eighteen months she has frequently reported herself, and I am glad to be able to state that her right thorax appears in every respect normal.

This case afforded me a valuable hint, for I have since noted if the endocyst is not removed at once profuse suppuration ensues, with marked constitutional symptoms, and these continue until it is expelled. Acting on this, I always continue the primary irrigation until collapsed cyst is evacuated. Seizing it with forceps is unsatisfactory, for it is so friable that it frequently breaks off. The best method is to attach a long Jacques' catheter to nozzle of irrigator, pass it deeply into cavity; immediately the quivering mass is forced by the pressure of lotion into wound, and can easily be extracted by a pair of fingers. By this means subsequent suppuration and hectic are appreciably diminished.

CASE VII. Hydatid Tumour of Liver — Cæliotomy — Recovery.—F. P., aged 29, married woman, was admitted 27th February, 1895. Patient was kindly sent to me by my friend, Dr. Robert Greene, with the diagnosis of a large hydatid cyst of liver, occupying almost the whole right half of abdominal cavity.

On 1st March, assisted by my friends, Drs. Shadbolt, Arthur Greene, and Cruikshank, a 3 inch vertical incision was made in right semilunar line. As no adhesion existed with parietal

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peritoneum, the abdominal cavity was shut off with sponges. A trocar was then inserted into cyst, and about 8 pints of clear hydatid fluid drawn off. The opening into cyst was next enlarged sufficiently to admit the hand, the endocyst was removed, cavity irrigated with warm 1 in 2,000 corrosive sublimate, the interior of cyst was carefully dried with sponges, and some iodoform dusted in. The opening in cyst was closed by a continuous silk suture, and the mass was then returned into peritoneal cavity. Finally, the external wound was united by three continuous silk sutures. Patient felt greatly relieved; highest temperature recorded was 99.6° on second evening; the wound healed by first intention, and the skin suture was removed on the tenth day.

15th day.—Temperature went suddenly up to 1013°. The abdomen was carefully examined, but nothing abnormal noted.

16th day.—Nocturnal temperature 1016°; tongue slightly

coated, no abnormal symptoms.

21st day.—A profuse nettlerash appeared, which caused patient considerable discomfort; notwithstanding a strict milk diet and a liberal allowance of alkalies and magnesia, this

continued going and coming.

32nd day.—She complained of a slight pain in site of incision, and on examination a faint fulness was detected at margin of right costal curvature. A hypodermic needle was inserted and a few drops of pus withdrawn. Chloroform was at once administered, and a 2 inch incision made over puncture; on opening the peritoneum an abscess was suddenly struck; luckily dense adhesions had formed, and the peritoneal cavity was firmly shut off, about 1 pint of pus was evacuated, and the abscess cavity proved to be the returned cyst. A large drainage-tube was inserted and cavity irrigated. Six days later the baneful urticaria disappeared, an uninterrupted convalescence ensued, and she was discharged cured on 6th May. In September, 1896, she sent word that she was quite well.

This case was particularly interesting to me, as it was the first occasion on which I practised Bond's operation, and, as far as I see, I am not likely to repeat it. Of course, the advocates of this method may justly say that it is absurd to judge it by one case, and that my technique was faulty. While most willingly admitting the force of such objections, I must say that as marsupialisation is such a safe procedure, and as the achievement of complete asepis occasionally baffles even the ingenuity of the most painstaking surgeons, I do not think the game is worth the candle. At the same time, I do not consider marsupialisation by any means a Utopian performance,

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for it entails a long convalescence, and frequently the patient is much debilitated before the cavity is finally closed. I think it would facilitate matters greatly if we would make large parietal incisions in order to thoroughly expose the cyst. By so doing, I feel confident that, in the majority of these cases, it would be an easy matter to remove a large portion of its wall and suture the remainder, if necessary, in folds to external

The prolonged attack of urticaria was very puzzling, for at the time I was not cognisant that there was such a thing as hydatid toxic poisoning, much less that nettlerash was a symptom of it; for this knowledge I am indebted to a recent

Epitome of the British Medical Journal.

In this case it is worthy of note that this toxic symptom did not appear until the twenty-first day after operation, and, I presume, as there was an elevation of temperature on the fifteenth day, suppuration had already commenced in cavity of cyst.

CASE VIII. Hydatid Tumour of Liver — Hepatotomy— Death.—Mrs. G., aged 51, married, admitted 22nd July, 1895. Patient was kindly sent to me by my friend, Dr. Dodds, with the diagnosis of hydatid of liver. Previous to this another colleague had made an exploratory puncture in ninth right intercostal space, in axillary line, and drew off a small quantity of hydatid fluid.

On examination, the liver was felt enlarged downwards to level of umbilicus. This enlargement occupied part of epigastrium, whole of right hypochondrium, and a portion of right lumbar region. Deep fluctuation was detected, but it was evident some liver substance intervened between cyst and

abdominal wall.

On 29th July, assisted by my colleagues, Drs. Shadbolt and Cruikshank, a 3 inch vertical incision was made, slightly external to right semilunar line. On opening the peritoneum, liver substance presented, and as no adhesion was present the general cavity was shut off with sponges. An aspirator trocar and cannula was inserted into liver, and at an inch in depth the cyst was struck. On withdrawing the trocar some clear fluid escaped; the trocar was immediately replaced in cannula, as I did not want the cyst to collapse until I was in a position to secure it. A blunt-pointed bistoury was then passed down alongside of trocar, and a half-inch incision made through whole depth of intervening liver tissue; profuse hæmorrhage at once occurred, the knife was withdrawn, sponge pressure applied, and the bleeding ceased. A closed sinus forceps was next inserted, the blades were gently dilated, and in a moment the whole field of operation was a sea of blood; as sponge packing failed, sutures were inserted through parietes deeply into liver substance, and sponge pressure again resorted to; unfortunately, with the pressure made, the sutures cut out. As blood escaped in a most appalling manner, my only hope semed to make for the cyst at all hazards, open it. and drag it forwards. The right index finger was bored along cannula through liver substance and blood; when the cyst was felt at tip of finger, it was seized with a tenaculum, and opened with a blunt-pointed scissors; in the rush of hydatid fluid and blood I luckily managed to grasp the cut edges of cyst with two large pressure forceps; forward traction was at once made, and the hæmorrhage ceased. My assistants kept a firm hold while I introduced six silk sutures through parietal wall, liver, and cyst; the forceps were then removed and no more bleeding occurred.

I had heard it said that there are occasions in the life of a surgeon when moments appear years; from the instant that I dilated the blades of the sinus forceps, until I stopped the torrent of blood, it seemed as if I had spent a lifetime. It would be absolutely futile to attempt to guess the number of ounces of blood lost, sufficient to say, all was blood around me. Having irrigated the cyst cavity with warm Condy, and removed the endocyst, I introduced a large drainage-tube and applied the usual dressings.

The local trouble over, the general condition had to be faced; patient was greatly collapsed, cold, and pulseless. She was rapidly removed to a warm bed, rectal injections of hot water, coffee and brandy were given every three hours, four drops of strychnine injected every four hours, and six hours after operation small quantities of brandy and soda were given by mouth. On the first morning patient had somewhat rallied, but despite all our efforts, the shock continued, and she died

on the following day. No post-mortem was obtained.

Never have I had a case that has given me such food for painful reflection, and I consider it a duty to publish it and state what I consider were my mistakes. Undoubtedly, the first was the introduction of a knife to cut through an inch of healthy liver substance; even after this the situation might have been saved, as sponge pressure was effective by merely emptying cyst through cannula, and closing the external wound, thus trusting to tapping to cure the trouble. The second and most lamentable error was attempting to make an

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opening in the liver by dilating the blades of sinus forceps. (The knife cut through, but these tore through, which was infinitely worse.) After this no ground remained on which to retrace my steps, and as the hæmorrhage had to be stopped, my finger was the only weapon left with which to lead such a

forlorn hope.

In the Lancet of 12th September, 1896, I read with interest a case of trans-thoracic hepatotomy, published by two well-known medical men, and I was particularly struck by the following paragraph:—"Except in abscesses which are unusually deeply seated, the simple method of pushing a knife into it alongside an ordinary trocar left in position to act as guide, and following this up with dressing forceps to dilate the opening ('an inch in depth') sufficiently to introduce a finger, appears to be a perfectly safe procedure." After my above experience, I am not certain whether I envy or pity the surgeon who has the courage to advance such an opinion, evidently from the experience of one lucky case.

In hepatic abscesses superficially located, the presenting liver substance is often merely a thin pyogenic wall; in such cases dressing forceps are harmless, but I look on a knife and dressing forceps as only suitable for opening healthy liver tissue in such operations as may be practised in the mortuary.

If it ever falls to my lot again to encounter an inch of healthy liver tissue on the road to an abscess or hydatid, I shall most certainly do the operation in two stages; it is absolutely essential to have a firm basis in order to arrest hæmorrhage by sponge or gauze packing, but such methods of hæmostasis are futile in a receding torn liver; sutures cannot be relied on, for they easily tear out if firm pressure is made. Consequently, the only hope is to have firm adhesion with the parietal wound, then if severe hæmorrhage occurs, we have something to press against. The second stage shall be carried out with a cautery, using a fine trocar as a guide.

CASE IX. Liver Abscess—Trans-thoracic Hepatotomy—Recovery.—G. E. H., aged 36, campman, was admitted into hospital on 1st August, 1895, complaining of loss of flesh, sweating, shivering fits, fever, increasing debility, a constant throbbing pain in upper portion of right hypochondrium and right scapular region, and an occasional hacking cough.

On examination, temperature was 103.6°; pulse, 90; respirations, 28; and tongue furred and dry. On percussion, liver dulness was found increased upwards to upper border of fourth rib; there was marked tenderness in fifth, sixth, and seventh

intercostal spaces, the slightest touch causing him to wince. The lungs were normal, and a slight friction sound was audible in lower intercostal spaces. Liver abscess being suspected, a long hypodermic needle was inserted in sixth space, midway between nipple and axillary line, and a few drops of grumous pus drawn off. Chloroform was administered, and, assisted by my colleagues, Drs. Shadbolt and Cruikshank, 21 inches of sixth rib were resected in site of puncture. The costal, diaphragmatic pleuræ, and diaphragm were incised, and as the liver capsule was found adherent to diaphragm, layers of pleura and diaphragm were coapted by a continuous circular silk suture. (When the costal pleura was opened air rushed in, but the chloroformist stated that the patient's breathing was in no way embarrassed by it.) The liver having been thus exposed, an aspirating needle was inserted, and at onefourth of an inch in depth an abscess was encountered; the part was then seized by a pair of sharp hooks, and with a blunt dissector an opening sufficiently large to admit finger was made, and some 31 pints of pus evacuated; a large drainagetube was introduced and cavity irrigated.

By the twelfth day constitutional symptoms had disappeared, cavity had greatly contracted, and purulent discharge had ceased. A few days later, some bile was noticed on the dressings; this gradually increased in quantity, and for three weeks some 4 oz. of this fluid daily escaped. This complication retarded patient's progress, he remained very thin and weak, and was greatly troubled with an eczematous condition of skin around wound. The fistula did not finally close until 25th September, and during the following week a marked improvement followed; he immediately gained weight and strength, and was discharged cured on 4th October. He reported himself in person ten months later, and was in excellent health. No

previous history of dysentery, enteric, or malaria.

Some authorities recommend enclosing a circle of both layers of pleura, diaphragm, and liver, by passing sutures before opening costal pleura. One of the advantages claimed is that little or no air enters the pleural cavity. One surgeon, who recently practised this method, writes:—"Another advantage of not incising the pleura until after the sutures have been introduced is that very little air enters the chest, and complete and sudden collapse of lung is thus prevented, a matter of some importance with the patient under the influence of an anæsthetic." Theoretically, this sounds all right, but his own attempt is particularly interesting. "In our own case air was sucked into the chest through a small accidental opening into

the pleura, as well as each time the pleura was punctured in the act of introducing sutures." The doctor "who administered the anæsthetic was unable to observe that this produced any effect upon the respiration. The same observation has been made when the pleura has been wounded in the act of removing a cervical rib." From his own statement, and the observation of his chloroformist, I fail to see where the great advantage lies.

In my opinion, the introduction of sutures into a nonadherent suppurating liver is fraught with danger, for if the abscess should be superficially located, an escape of pus may take place into the peritoneal cavity through the needle punctures before the part is exposed. It is hardly necessary to mention that the portion of liver intervening between abscess and peritoneal cavity is often merely a pyogenic wall; and most probably the tension of sutures would be quite sufficient to enlarge needle holes, and thus afford one or more outlets for pus. Again, if firm adhesion have previously taken place between liver and diaphragm, the insertion of sutures into this part is altogether superfluous, as well as unnecessary. and their application only wastes valuable time. Because a method is associated with the name of a very distinguished surgical authority, I do not see why its advantage should be blindly accepted, particularly so, since it is at variance with a tenet of everyday surgery—"See what you are doing."

Another suggestion made, which I cannot omit referring to, in regard to the treatment of hepatic abscesses, is to insert a needle, draw off some pus, submit it to a bacteriological examination, and if the pus is sterile, delay operation for forty-eight hours. As against the adoption of such a routine, I wish to most clearly emphasise that, in my opinion, no form of exploring needle should be employed unless real doubts exist as to the nature of the case, for I consider such an instrument a most dangerous weapon, and no surgeon should ever insert it into any abdominal swelling unless his chloroformist, assistants, and instruments are at hand; if pus is struck, it should be then and there evacuated by an open incision.

CASE X. Suppurating Hydatid of Liver—Caliotomy—Recovery.—J. F., aged 28, station-master, was admitted 4th September, 1895. For the previous ten months patient complained of stomach trouble, and he was treated all that time for dilatation of that organ.

On admission, a distinct swelling was visible in epigastrium,

and on palpation, fluctuation and downward inspiratory movement were readily elicited; examination was unattended with tenderness. Temperature, pulse, respiration, and other organs

normal. No history of rigors, fever, pain, or sweats.

On 12th September, assisted by my colleagues, Drs. Shadbolt and Cruikshank, a 3 inch vertical incision was made in median line, midway between xiphoid and umbilicus. When the peritoneal cavity was opened a non-adherent hydatid cyst presented. Sponges having been applied in the usual way, a medium-sized trocar was inserted into cyst, and about 2 pints of yellowish pus evacuated. The trocar opening was seized by two sharp hooks, the cyst drawn forwards; with blunt-pointed scissors the opening was enlarged, the cavity was then irrigated, and a collapsed necrosing endocyst removed. Marsupialisation was effected by a continuous silk suture, and a large drainage-tube inserted. An uninterrupted convalescence ensued, and patient was discharged cured on the forty-sixth day.

This is the only case of primary suppurating hydatid cyst that I have met with, and it is worthy of note that no constitutional symptoms accompanied the suppuration, although from the gangrenous appearance of the endocyst, it must have been going on for a considerable period before operation.

CASE XI. Hæmatoma of Liver—Hepatotomy—Recovery.—A. K., aged 27, shepherd, admitted 24th July, 1896, with the following history:—Eight months ago he received a "puck" from a bull in right hypochondrium; severe pain followed, which necessitated his remaing in bed for seven days; after this he felt all right and resumed work. A month later the pain returned, and he for the first time noticed a slight swelling to inner side of costal arch (right); after another week's rest in bed these symptoms disappeared, and he returned to mind his sheep, which, by the way, entailed being in the saddle from sunrise to sunset. During the ensuing six months he felt perfectly well, but about the middle of June, 1896, the pain and swelling reappeared, and as a few days' rest failed to relieve him, he came to Buenos Ayres and entered the British Hospital.

On examination, patient's general condition was normal, and he only complained of pain and tenderness in above site. A very slight fulness was noticed close to right costal recession. On percussion, dulness was by no means distinct; but on palpation it was thought some deep fluctuation was elicited. A long hypodermic needle was inserted, and a syringeful of

dark altered blood withdrawn. Chloroform was given, and assisted by my colleague, Dr. Shadbolt, a 2 inch vertical incision was made over site of fulness; the liver was found in close proximity to parietal peritoneum, but non-adherent. The needle was again introduced, and at a depth of one-fourth inch a cavity was struck. Sponges were employed as before; the liver was seized by two sharp hooks and drawn forwards, and with the handle of a Jordan-Lloyd's scalpel an opening sufficient to admit the finger was made. As no fluid escaped, the opening was considerably enlarged, in order that the interior might be thoroughly inspected; it was found half empty, and contained a large quantity of coagula and clots, and about 1 pint of dark-greenish blood; its wall was then examined, and found to be liver tissue lined with laminated fibrin; as nothing else was present, the diagnosis seemed obvious—an old rupture of liver with a very large extravasation of blood. The cavity was irrigated, and a large quantity of coagula evacuated; some old adherent clots were dislodged with a Volkmann's spoon, and removed. Marsupialisation having been effected, a large drainage-tube was inserted and dressing applied. some days after operation many pieces of coagula came away with each irrigation, the temperature did not exceed 99°, and he was allowed out of bed on the eighteenth day.

On 13th August, the nurse, while irrigating, noticed something in wound; she tried to catch it with dressing forceps, but it slipped back into depth of cavity. On the following day I determined to find out what the "thing" was; a Jacques catheter was attached to nozzle of irrigator and passed deeply into cavity. With the pressure of the lotion a collapsed necrosing hydatid cyst presented; it was caught with the fingers and removed. Suppuration with nocturnal fever followed, and while the lower end of hepatic cavity had almost closed, a large space yet remained in upper part of liver substance; and as it did not show any tendency to contract, and as the patient was daily losing ground, on 12th September I removed 2½ inches of ninth rib in axillary line, performed trans-thoracic hepatotomy, and established a free counter opening. A stream of lotion readily flowed from lower wound through upper and vice versa. Rapid contraction of cavity followed, and he was allowed out of bed on 24th September. A fortnight later he unfortunately developed a sharp attack of dysentery, which threw him back considerably. However, by free use of stimulants, tonics, and the garden, he was discharged cured on 20th October.

When the first operation was completed, no doubt existed in No. 5.

our minds but that the bull made a large rupture in patient's liver; the absence of any cyst, and the presence of nothing but altered blood and clots, seemed to make it conclusive that extravasation had taken place, and as the cavity was found half empty, the inference was that a large quantity of the effused blood had been absorbed; yet, the fact remains, on the twentieth day an hydatid cyst was removed. There can be no doubt that both the bull and echinococcus took parts in this most extraordinary "piece," but what "the plot of the play" was, remains, as far as I am concerned, a matter for speculation.

In many of these cases I have noted the fact that the upper part of the cavity in liver is the last to contract. The counter opening made in this case had a most rapid effect, and in future I will not hesitate to do it in cases that show the same

tendency.

CASE XII. Collapsed Hydatid Cyst of Liver—Collistomy— Recovery.—R. P., aged 36, clerk, was admitted on 6th August, 1896, with the following history:—About two years ago a dull pain commenced in right hypochondrium, just below ribs, which gradually increased in intensity. Six months later he noticed a swelling in same region, but at no time suffered from any rigors, sweats, jaundice, or fever. During this period he was under the care of four different "medicos," and each diagnosed congestion of liver, and pronounced the case hopeless. As a dernier ressort, he consulted a fifth in July last; the latter suspecting hydatid, inserted an aspirating needle on 26th July, and removed "a bucketful of watery fluid." Fever immediately followed the operation, the tongue became foul, and the pain, instead of diminishing, became more intensified. His doctor advised removal to hospital in order that an operation might be performed.

On examination, patient was very emaciated, temperature 101.4°, and tongue thickly coated. A puncture point was visible in right semilunar line (level of umbilicus); no distention or tumefaction was present. On percussion, there was dulness continuous with that of liver, extending downwards from lower border of ribs to level of iliac crest, but no fluctuation was made out. Patient complained of tenderness all over right side of abdomen. He was kept under observation for two days; no rigor or shivering occurred, the evening temperature reached 102°, he perspired profusely, and the pulse was

110, small and wiry.

The condition was diagnosed as suppuration in cyst following puncture. On 8th August, assisted by my colleague, Dr. Shad-

bolt, a 3 inch vertical incision was made in right semilunar line over site of puncture; on opening the peritoneum, a collapsed non-adherent cyst presented. As the patient was in a very weak state, the cyst was rapidly drawn to surface by two sharp hooks, opened, and fixed to parietal wound. It contained a collapsed cyst and about 1½ pint of clear hydatid fluid. The interior was sounded by a long probe, and found to be of enormous dimensions, the probe passing upwards in liver to level of sixth rib in nipple line, and downwards to ilium. Indeed, it could well contain "a bucketful of fluid." There was not the least trace of suppuration in or about the cyst. Patient was very much collapsed, and the shock lasted for two days. A week later matters were seriously complicated by an attack of right basal pneumonia; for the following three weeks things looked very bad, but he gradually regained strength, and was discharged cured on the sixtyseventh day.

The interesting feature in this case was the sudden supervention of fever, &c., after tapping. When he entered hospital I almost felt certain suppuration was taking place, most probably in cavity of cyst; but as none was found at operation, I take it that it was another instance of hydatid toxic poisoning following the use of a needle. What I said in a previous case in regard to the danger of puncturing an abscess applies equally, if not more so, to hydatid cysts, now that this toxic poison is a recognised entity. Owing to the feeble condition of patient, I hurried through the operation, and did not attempt removal of a portion of cyst wall. Afterwards I regretted I had not done so, for the subsequent suppuration, although slight, was about as much as the patient could stand.

CASE XIII. Hydatid Tumour of Liver—Trans-thoracic Hepatotomy—Recovery.—J. G., aged 47, labourer, was admitted into hospital on 24th August, 1896. On the 28th May, 1896, when in bed, he was suddenly seized with a stabbing pain beneath right lower ribs. After forty-eight hours it subsided, and he continued at his work during June and July, but occasionally complained of a slight pain about angle of right scapula.

On admission, he appeared well-nourished, had a good appetite, and a normal temperature; liver dulness was found increased upwards to upper border of fourth rib, breath sounds were absent over this area, and nothing else abnormal was

noticed in his condition.

On 30th August, a colleague, for diagnostic purposes, at my

own request, inserted a long hypodermic needle into fifth intercostal space, and a syringeful of clear hydatid fluid was drawn off. Ten minutes later the patient was covered with a profuse urticarial rash, and temperature was found to be 101°. evening temperature reached 102°, and on the following morning the rash had almost disappeared, but the temperature yet remained over 100°. Chloroform was administered, and assisted by my colleague, Dr. Shadbolt, 3 inches of sixth rib were removed in axillary line, the costal and diaphragmatic pleura were incised and united to diaphragm by a circular continuous silk suture. The entry of air into pleural cavity, at this stage of the operation, caused no respiratory inconvenience. diaphragm was next incised, and as liver was found nonadherent, a circular continuous silk suture was passed through capsule and diaphragm. As fluctuation was readily elicited through portion of liver thus exposed, a large-sized curved trocar and cannula were inserted, and 3 pints of clear hydatid fluid evacuated. The trocar was removed, opening enlarged by finger, and cavity irrigated with warm Condy until cyst was expelled; no pus found. A large drainage-tube was inserted and dressings applied. Convalescence was delayed by a very persistent biliary fistula, and he was not discharged cured until the 4th of December. The rapid supervention of toxic symptoms after tapping adds further proof as to the danger of using a needle as a means of arriving at a definite

In a recent Epitome of the British Medical Journal, a most lamentable case of hydatid tapping was recorded, in which death occurred within two minutes. With such experience, the question that must naturally arise is—Is the use of the needle justifiable, even if the diagnosis is not obvious? In many cases it is undoubtedly a very convenient instrument, yet convenience must never be allowed to weigh against a

grave danger.

I have never met with, nor have seen recorded, hydatid toxic poisoning following the operation of marsupialisation; therefore, I conclude that an open wound is as harmless as diagnostic puncture is dangerous. Doubtless, there are some who may reasonably say—Why not dispense altogether with such a means of diagnosis? All the same I confess I look on removal of portion of rib and opening pleura and diaphragm as a serious measure, and only advisable in cases where fluid is certainly present. I think, if it was made a rule, that the needle should only be used on the operating table, and if fluid is struck, it should at once be removed by an open incision,

that in the great majority of cases the danger of toxic poisoning would be eliminated.

CASE XIV. Hydatid of Liver—Cæliotomy—Recovery.—J. M., aged 32, servant, was admitted to hospital on 26th October, 1896. Patient was kindly sent to me by my friend, Dr. Apjuan, who, by the way, made the diagnosis of hydatid disease of liver without resorting to that dangerous, untrustworthy, surgical ready-reckoner, the aspirating needle.

On examination, the liver was found enlarged downwards to level of umbilicus, and deep fluctuation was elicited. There was no history of fever, sweats, rigors, jaundice, or

wasting.

On 28th October, chloroform was administered, and a 3 inch incision made in right semilunar line. On opening the peritoneum, liver substance presented, sponges were applied as before, a trocar and cannula were inserted into liver, and at the depth of one-third of an inch a cyst was struck. With a Paquelin's cautery an opening was made alongside of cannula, the cyst was seized with two sharp hooks and drawn to surface. An opening was next made into cyst, and about 3 pints of clear fluid evacuated. With irrigation the collapsed cyst and eighteen daughter cysts were removed; the latter varied in size from that of an orange to a pea. On examining the boundaries of cyst it was found completely surrounded by liver substance—in fact, this organ was literally converted into a bag of hydatid cysts.

Marsupialisation having been performed, a large drainagetube was inserted. The cavity was irrigated twice a day with warm Condy, and an uninterrupted convalescence followed. Contraction of cavity was hastened considerably by the occasional use of a long Volkmann's spoon; this method of removal of cyst wall rendered suppuration unnecessary, and, consequently, hectic was absent throughout convalescence, and

he was discharged cured on 14th December.

I wish to mention that as yet I have never detected hydatid fremitus; whether this is due to my want of tactile appreciation or not, I cannot say.

## PUBLIC HEALTH.

# OUTBREAK OF ENTERIC FEVER AT POSSILPARK, GLASGOW.<sup>1</sup>

In the early days of March it came to our knowledge that enteric fever was occurring among the customers of a dairy carrying on business at Possilpark. While as yet nothing more was known than this, a visit to the farm from which the milk sold in this dairy was obtained, left the impression quite clear that the source of infection did not lie there. The farm hands were well, the drinking water of the cattle was good, and the cattle were reported healthy. Following the milk from the farm to the dairy, and examining step by step the various incidents of its transport, delivery, and distribution, we reached the end of this part of the enquiry with the conviction that the milk was exposed to no impurity between its production and distribution at the time of our enquiry. Meanwhile, the number of cases of enteric fever coming to our knowledge was increasing, and the constant association of these cases with the use of the milk in question created an obvious impression as to their origin. One could not, while the events were still in their development, see how prominently these cases and their associated milk supply were to stand out from other cases and other milk supplies when sufficient time had elapsed to allow of these being looked at when the whole action had ceased. At the present date such a view is possible, and we find that from the beginning of January till the date of writing—25th March—of 31 cases of enteric fever occurring in the Possilpark district, 28 were customers of the dairy in question. This aggregation of cases in the course of one milk supply did not arise from any preponderance of this supply in the total milk consumed in the district. A milk census of the tenements where the patient resided made this abundantly clear. The 28 cases arose in 22 families, residing in 19 separate tenements, which housed collectively 227 families. Of these families, 67 used the milk supply in question, and 160, other supplies. None of the families using the other supplies sickened, whereas we have just seen that 22, or one-third of the families using this particular milk, were attacked. And yet, as has been stated, when the cases were brought to our knowledge, no present source of impurity affecting the milk could be dis-

<sup>1</sup> Extracted from Medical Officers' Report for fortnight ending 27th March, 1897.

covered. At the time of enquiry, however, we found that a former employee had left the service of the dairy during February, but the bearing of this part of the enquiry will be better appreciated after we know the dates of sickening of the several cases.

They, as now known, occurred as follows:—

DATE.		Numbers Sickening.			Dat	Date.			Numbers Sickening.		
Feb.	11,			2	Feb.	24,			1		
,,	14,			1	,,	26,			2 -		
,,	15,			2	Mar.	1,			3		
,,,	17,			1	,,	2,			1		
,,	18,			2	"	3,		•	1		
,,	21,			4	,,	7,		•	1		
,,	22,			1	,,	8,		•	1		
,,	23,			1	,,	9,		•	3		

Another case sickened early in March, but we are unable to fix the date more precisely; so that, in all, 28 cases sickened

over a period of twenty-seven days.

The whole outbreak, therefore, begins on 11th February, and ends on 9th March. The employee of the dairy already referred to, who was a saleswoman, left the service because of a rearrangement of the work on 24th February. It was known by her fellow worker that her father was ailing at this time, and during our enquiry at the dairy this came to our knowledge. The doctor attending him having been communicated with, a visit with him to the dairymaid's father was arranged. At this visit the following history was obtained :-

During the last week in January this man became ill of diarrhœa, which continued during the first week of February, and was then accompanied by such weakness that he stopped work and went to bed on the 8th. He was then seen by the doctor, whose early impression was that the symptoms might be due to enteric fever, but this was abandoned because of the rapid abatement of symptoms a few days after the patient went to bed. By 2nd March he was able to be up every day, and was seen by us together at the end of the second week in March. The question then to be decided was—Had this patient passed through an attack of enteric fever? and an examination of his blood by Widal's serum test led us to conclude that he had.

Within three weeks of this illness beginning, cases of enteric fever began to occur among the dairy customers, and the last

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to sicken fell ill thirteen days after the shopgirl left. Between the dairy and the house is a distance of nearly  $1\frac{1}{2}$  mile, but the possible path by which the infection was conveyed we have utterly failed to discover, although the eating, sleeping, and general domestic arrangements were inquired into with the utmost care. The girl who attended the Possilpark dairy occupied a bed in the room with her sister, who attended a dairy much nearer their house. Both sisters being occupied in the same business had many customs in common, but no infection occurred among the customers of the sisters' dairy.

We have no hesitation, however, in regarding the disease in this household as having occasioned the outbreak among the Possilpark customers, and the whole incident but further emphasises the need for keeping all who are in any way associated with disease absolutely apart from the trade of

milk purveying.

## CURRENT TOPICS.

LORD LISTER AND HIS FORMER HOUSE SURGEONS AND Dressers.—Not the least interesting of the many expressions of esteem and regard which have been offered to Lord Lister on his elevation to the peerage is the banquet which is being organised by those who have served under him in Glasgow, Edinburgh, and London as his house surgeons, clerks, and dressers, and who have therefore been intimately associated with him in the spread of his discoveries and the elaboration of his principles. The dinner will take place at the Café Royal, Regent Street, London, on Wednesday, 26th May. It will be presided over by Professor Joseph Coats, and will be limited to those who have served under Lord Lister as house surgeons, clerks, or dressers, as its intimate character is to be strictly preserved. Lord Lister entered on his duties at Glasgow in 1861 and at Edinburgh in 1869, so that considerable difficulty has been experienced in obtaining the names and addresses of his assistants in the early period of the thirty-two years during which he was a teacher of clinical surgery. We are asked to say that all who have filled any of the offices mentioned should communicate at once with the honorary secretary of the Glasgow sub-committee, Dr. Dougan. 2 Sandyford Place, Glasgow, and should mention the year in which they held office, and it is hoped that this information

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will be given whether they are able to attend the dinner or not, as it is desired for sentimental reasons to draw up a correct list, in chronological order, of the gentlemen who have been privileged to assist practically in the development of antiseptic-surgery.

THE ORDER OF THE DOUBLE DRAGON has been conferred by the Emperor of China on Mr. D. Craigie Gray, M.B., C.M., who graduated at Glasgow in 1887, in consequence of services rendered under the "Red Cross" to the wounded in the Chino-Japanese War. Three of Dr. Gray's colleagues—Mr. Thomas Brander, M.B., C.M. Edin.; Mr. Dugald Christie, L.R.C.S. and L.R.C.P. Edin.; and Mr. Chas. De B. Daly, M.B., M.Ch. Dub.—likewise received the decoration.

## MEETINGS OF SOCIETIES.

# GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING IX.-19TH FEBRUARY, 1897

PROFESSOR M'CALL ANDERSON, M.D., in the Chair.

I.—NOTES OF AN UNUSUAL CASE OF GENERAL PARALYSIS OF THE INSANE.

By Dr. R. D. HOTCHKIS.

Dr. Hotchkis' paper will be published as an original article in our next issue.

Dr. Oswald was impressed by certain features of the case which differed from those displayed in the usual form of general paralysis. Thus the patient, instead of possessing a high type of mental constitution, had always been somewhat wanting in intellectual power; his delusions had been very changeable, and it had been possible to convince him of their baselessness. Dr. Oswald considered it probable that the case was one of developmental general paralysis to which was added later an attack of syphilis. His experience was decidedly in favour of the view that general paralysis is a result of syphilis, either acquired or inherited. It was necessary to recognise

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that there were cases of general paralysis in which there was little or no excitement, and which usually ended in dementia. Neither in these, nor in any other varieties, was it reasonable to expect benefit from treatment unless the disease was diagnosed at the outset, and the patient at once placed under proper care.

Professor M'Call Anderson considered it of great importance to recognise the fact that a large proportion of the cases, not only of general paralysis, but of other organic diseases of the

nerve centres, had an undoubted syphilitic origin.

Dr. Marr drew attention to the characters of the false membrane found on the deep surface of the dura mater as supporting the view that such membranes are the result of repeated hæmorrhages.

II.—PARALYSIS OF THE EXTERNAL RECTUS MUSCLE OF THE RIGHT EYEBALL ENDING IN RECOVERY, AND FOLLOWED BY AN IDENTICAL EXPERIENCE ON THE OPPOSITE SIDE.

## By Dr. LESLIE BUCHANAN.

The patient was an unmarried woman, aged 30 years. Whilst in her usual good health she, without manifest cause, commenced to complain of frontal headache, giddiness, and indistinctness of vision. When seen some fifteen days after the commencement of these symptoms, she was found to have complete paralysis of the right external rectus muscle. persisted for a time, and then gradually disappeared. Shortly afterwards, however, a similar paralysis appeared on the left side, but this was not of long duration. The bilateral distribution necessarily excluded any local orbital condition as a cause, and also the possibility of a single supra-nuclear lesion. Syphilis and rheumatism were discussed as possible etiological factors, but were negatived, both on general considerations and by the distribution and transitory duration of the paralysis. There was no evidence of spinal disease, and as the patient had remained in good health for a period of two years since the ocular symptoms disappeared, it was concluded that the case must be placed in the functional or hysterical class.

Dr. Maitland Ramsay expressed the opinion that the development of any ocular paralysis must be regarded as a danger signal, and further, that the fact that the paralysis is limited and transitory makes its significance all the more serious. A paresis of rheumatic origin is often very persistent; syphilis also produces long continued paralysis, and is apt to involve all the muscles and so cause complete ophthalmoplegia;

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but in many cases of organic disease of the central nervous system a transitory paralysis of perhaps a single ocular muscle is the earliest symptom. Hence such an occurrence must demand a very guarded prognosis. Dr. Ramsay quoted a case he had had under observation for the past two years which illustrated the view he now advocated.

Professor M'Call Anderson entirely agreed with this statement, and pointed out how frequently a temporary and recurring ocular paralysis was an early symptom in progressive locomotor ataxia.

Dr. Leslie Buchanan, whilst quite admitting the general gravity of any ocular paralysis, could not but feel difficulty in believing that his patient had any organic nevous disease, considering the fact that she had now been free from all symptoms for fully two years.

## III.—OBSERVATIONS ON THE USE OF ANTITOXIN IN THE TREAT-MENT OF DIPHTHERIA.

### BY DR. WALKER DOWNIE.

It may appear somewhat late in the day to read a communication on the use of diphtheria antitoxin before this Society; but I am so strongly impressed with the importance of this subject that, after considerable experience of its action, I venture to occupy some of the time of this meeting in its consideration.

The history of its introduction, and the discussion to which its employment gave rise, are familiar to all of you, as it was a departure in therapeutics in which the whole profession was interested.

It is no part of my intention to-night to discuss the opinions, statements, or statistics of others; my wish is to describe very shortly my own experiences of this antitoxin, and to make some remarks thereon.

With the many serious complications which followed the injection of Koch's tuberculin fresh in my mind, I began the employment of diphtheria antitoxin with a certain degree of adverse bias; but as the evil effects following its use were shown to be infinitesimal, and as the sources from which it could be obtained became more numerous and were proved to be thoroughly reliable, I adopted it, and have since become more and more convinced of its efficacy, when employed aright.

Before speaking of its action it will be well to say a word

on the symptoms of diphtheria, in order that we may fully appreciate the effects of antitoxin on the course of the disease.

Diagnosis of Diphtheria.—Diphtheria of the respiratory tract is divided into faucial or pharyngeal, and laryngeal

diphtheria.

Faucial diphtheria and acute follicular tonsillitis are frequently mistaken one for the other; but though cases do occur in which the most experienced may have doubt, yet in the majority of cases the symptoms of diphtheria are sufficiently definite to exclude doubt if they are carefully examined.

Diphtheria is characterised by asthenia. There is therefore -(1) Languor or general depression. (2) The temperature, if above normal, is only slightly raised: it is exceptional to have it in the first few days over 101° or 102° F. at most. (3) The pulse is rapid. There is a marked disproportion between the pulse and the temperature, the rapidity of the pulse being due to asthenia (cardiac weakness) and not to rise in temperature. (4) Glandular enlargement. The cervical glands at the angle of the jaw are usually enlarged and tender, and though in the majority of cases they do not tend to suppuration, their presence serves in most cases to point to the nature of the condition. (5) Freedom from pain on deglutition is the rule, and there is no difficulty in opening the mouth widely. (6) The presence of false membrane; this is tough, greyish-white, and opaque, usually occurs as a single patch, or if others are present, they are few in number. The membrane of diphtheria lies on the surface, to which it is firmly adherent. (7) Absence of knee-jerk. In the majority of cases of diphtheria there is early abolition of the knee-jerk. It can readily be tested while the patient lies in bed if the hand be placed behind and immediately above the knee and the thumb over the rectus femoris muscle, and while the knee is raised slightly from the bed the patellar ligament is gently tapped. (8) The absence of the knee-jerk is of far greater importance than albumen in the urine, which is only met with in about one-third of all cases of diphtheria, and which even in those cases occurs at irregular intervals. It is not constant throughout the illness.

In acute follicular tonsillitis there is absence of languor, the temperature is distinctly high, and the increase in the pulserate is in proportion to the elevation of the temperature; there is no glandular enlargement; and the white patches of secretion are numerous—there is thus safety in numbers—each spot corresponding to a lacunar opening, and the knee-jerk is

unaffected.

In laryngeal diphtheria there is languor, comparatively low temperature, a rapid pulse, and absence of knee-jerk similar to that noted in connection with the faucial affection. But there are in addition evidences of gradual and progressive stenosis of the larynx. In the early stage of interference with respiration the attacks of dyspnœa have periodical exacerbations, indicating that they are in part due at this stage to spasm of the glottis rather than to obstruction or occlusion of the larynx or trachea by masses of membrane. The point of importance in this observation is that a comparatively small exudation will occasionally excite a considerable degree of dyspnæa, and the removal of that small patch will relieve the urgent symptoms.

The chief dangers of diphtheria of the respiratory tract are twofold—(1) Constitutional toxamia, the result of absorption from the affected surface, and (2) suffocation, from mechanical obstruction to respiration; and I wish to show how thoroughly

these are averted by the exhibition of antitoxin.

Quality of Serum—When and How to Employ it.—Now, in the employment of antitoxin to combat diphtheria, I would direct your attention to four points, the observation of which, in my opinion, is essential to success—(1) Fresh serum; (2) early administration; (3) full dose; (4) repeated injection.

1. Fresh Serum.—Whether the antitoxin serum be hermetically sealed, or treated by the addition of a preservative, it tends to lose activity, and this occurs apparently quite apart from any change through decomposition. If it is kept for a time it becomes turbid (there may occasionally be slight cloudiness from presence of fibrin), and later it may decompose.

Freshly drawn serum should be employed when possible, or if it be supplied through an agent, that bearing the most recent date should be chosen. A serum which is clear is absolutely safe; one which has a slight cloud (of secondary fibrin) in a clear fluid and is without odour is also safe, but one which is turbid throughout is not only unsafe, but its injection may be followed by septic mischief. And the activity of such a serum as a protective or antitoxic agent is somewhat doubtful.

2. Early Administration.—The desire to make sure of or to check the diagnosis by bacteriological examination before announcing the disease to be diphtheria or before administering antitoxin is frequently expressed. While in no way underrating the value of bacteriological examination of the membrane, nor minimising the pleasure of having the presence of the

Klebs-Loeffler bacillus demonstrated, I hold that delay in such a case is very wrong, and that if the various clinical features of the case have been carefully considered and the physician as a result suspects or concludes that the condition is diphtheria, antitoxin should be given at once.

Let a portion of the membrane, if within reach, be taken by all means, but treatment should be begun before a culture could be obtained. Early administration will save much

anxiety as well as many lives.

- 3. Full Dose.—The giving of a small dose was, I fear, the chief cause of failure in early cases. Accustomed as we were to give 5 or 10 minims of some watery solution as a hypodermic injection, one stood aghast at the thought of injecting subcutaneously 20 c.c. (nearly 6 drachms) of an animal fluid; and most men thought it wise to err on the safe side and begin with a much smaller quantity. Such practice tended to bring discredit on the remedy. The first injection should always be a fairly large dose. This does not necessarily imply a large quantity, as the quantity depends entirely on the potency of the serum employed. The strength of the serum is expressed in terms of its protective value as tested upon guineapigs injected with such a dose of toxin as would prove fatal within a given time. The various manufacturers indicate the strength of the serum on the phial; the average presently issued is in the proportion of 100 units of immunisation to the cubic centimetre. In an average case, seen in the earlier stages, 5 c.c., equal to 500 units of immunisation, is the dose to be recommended for first injection, while double that quantity may be given when symptoms—toxemia or laryngeal obstruction—are severe.
- 4. Repeated Injection.—When marked improvement does not follow the first injection within twenty-four hours, the injection should be repeated at the end of that time, and again, if thought necessary, in forty-eight hours from first injection. In these subsequent injections the same dose as given at first may be repeated, or it may be increased or modified according to circumstances.

Administration of the Injection.—The syringe employed should hold from 5 c.c. to 10 c.c., and be made of such material and so constructed that it can be readily sterilised.

The injection should be made into a part where the subcutaneous cellular tissue is abundant, such as over the abdomen, buttock, or thigh; and, prior to injection, the skin over the proposed seat of puncture should be well cleaned. The

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quantity to be injected will depend on the degree of concentration of the serum adopted. Absorption of the serum injected rapidly takes place, so that the swelling due to the fluid introduced disappears within a few hours, and usually gives no further trouble.

Favourable Results Following the Use of Diphtheria Antitoxin.—(a) In Diphtheria of the Fauces and Pharynx.—In an average case there is within twenty-four hours of the injection of a full dose some indications of its action, and the

changes which occur are both constitutional and local.

The changes in the general condition consist of (1) a gradual lowering of the temperature, and if the temperature has been high, the fall will be all the more marked; (2) an improved state of the pulse; and (3) an improvement in the general comfort of the patient. Locally there is (1) a diminution in the redness and swelling of the fauces; (2) the growth of the membrane is lessened or it may be checked; and (3) the patch of exudation becomes detached at its circumference. At the end of forty-eight hours, the injection having been repeated in the interval, there is in an average case of faucial diphtheria further improvement in the general state of the patient, but the most palpable change takes place in the local conditions. The most pleasing of these is separation of the membrane; portions break away and are expectorated or are swallowed, so that at the end of forty-eight hours from the first injection, little if any membrane remains, or if any portion is still present it is loosely attached and is inert. After being shed in this manner, I have not once seen it recur, as so frequently took place when the membrane was removed by force or by the use of solvent applications.

(b) In Diphtheria of the Larynx.—The good resulting from the use of fresh antitoxin used early and in full dose in cases of laryngeal diphtheria is still more striking. I may best illustrate this by stating a case typical of several which I have seen in consultation during the past eighteen months. A well-nourished child, 2 years old, was seen by the family adviser for the first time on a Thursday morning; he diagnosed laryngeal diphtheria, and prescribed medicinal remedies. On the following day he asked me to accompany him to see the child, when I was informed that, three days before, the child had been apparently well, but that during the past two days it had suffered from increasing dyspncea, with croupy cough and hoarse cry, and that throughout the whole of the previous night it had been very restless. There were

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no patches on the fauces or pharynx, but there was marked laryngeal obstruction, with slight lividity of the lips. Tem-

perature was 101.4° F.; pulse, 140; respirations, 42.

I had been called with the object of performing tracheotomy, but I strongly urged in the first instance the use of antitoxin, and at once administered 5 c.cm. (500 im. units) Behring antitoxin (2 P.M.). At 10 P.M. the temperature was 100.2°; pulse, 130; respiration, 40. On the following morning (Saturday, at 11 A.M.) I repeated the injection, as the child's condition was very similar to that noted on the previous night. At midnight the child had a fit of coughing, following which the respirations were quiet, and the child fell into a deep sleep which continued for ten hours. On Sunday forenoon the pulse, which had fallen to 100, was good and full, the temperature was 98.6°, and the respirations 24; from this point the child was convalescent.

I have now had eight cases to which I was called for the express purpose of opening the trachea, where in each case, even with such marked laryngeal obstruction present as to suggest operation, the need for operation was averted, and the obstructing membrane limited, loosened, and discharged most satisfactorily, by the help of antitoxin. Each of these eight

cases recovered without operation.

I have had cases in which I have performed tracheotomy or intubation and injected with antitoxin, which have died, just as I have had recoveries following tracheotomy before the days of antitoxin. But the operation was done and antitoxin employed late in the course of the disease and when toxemia was advanced, and it is in order to lessen the number of those extreme cases that I urge the early administration of antitoxin.

But even in those extreme cases antitoxin has proved most helpful in the saving of life. And in proof of this I will go beyond my own personal experience and quote, in order to contrast, the totals from the mortality tables of the Metropolitan Asylums Board for two years, where in each year the number of cases operated upon is practically identical, and the conditions, except for the absence of antitoxin in one and its employment in the other, the same. In 1894 (no antitoxin) 261 cases were operated upon, 184 of whom died, giving a mortality of 70.4 per cent. In 1895 (antitoxin used) 255 cases were operated upon, 125 of whom died, giving a mortality of 49.4 per cent. Such statistics, in which severe and undoubted cases of diphtheria alone are dealt with, are of

far greater significance than those dealing with cases of diphtheria affecting the fauces, pharynx, and larynx indiscriminately, as, apart from inclusion of other conditions through mistaken diagnosis, different epidemics, as is well known, vary much in virulence, and the results of medicinal treatment cannot well be compared.

Alleged Injurious Effects.—It is said that albuminuria and paralysis occur much more frequently as sequelæ in those cases treated with antitoxin than in those who recovered without its use. Personally, this is not my experience, but if a larger number are so affected, the reason ascribed by those having large hospital experience may be the correct one-viz., that as recovery takes place in a larger proportion of serious cases now than formerly, observations on the subsequent course of severe cases, formerly precluded by death, are Again, pains in the joints resembling those now possible. of acute rheumatism have been attributed to the use of antitoxic serum; and the appearance of urticaria, beginning usually about the eighth day near the site of the puncture and spreading over the trunk and extremities, has certainly resulted from the injection. Concentration of the serum has reduced the bulk of the injection, and, as a direct result, these two ill effects are now much less common. And if the injection be given with due care and cleanliness, I know of no other complications.

Conclusion.—As may be gathered from what I have said, I strongly advocate the freer use of antitoxin in the treatment of diphtheria; and what I have said has been said with the hope of encouraging the family physician to recommend and administer it at the earliest possible moment, feeling sure that, if he employs fresh serum, and if he gives it early and in full dose, he will have no cause to regret its adoption.

Dr. Downie, in reply to a question, said that he recommended every physician likely to meet with such cases, and particularly those practising at some distance from a centre, to have dried serum always at hand. Each tube of Messrs. Burroughs & Wellcome's preparation, which keeps well, is said to contain 600 immunising units, and that quantity can be dissolved in a little over 1 drachm of water. The water, sterilised by being boiled, must be absolutely cold before the crystals are added, otherwise coagulation will take place. The use of this preparation should be followed by an injection of fresh serum

within twenty-four hours. Having the dried serum at hand, even although its immunising power may be considerably reduced in the process of drying, yet what it contains is more than sufficient in the early stage of many cases to stay the progress of the disease or to greatly modify its course.

Dr. Howie was glad to hear Dr. Downie's conclusion that it was in most cases quite possible to recognise diphtheria without a bacteriological examination. He entirely agreed with this.

Dr. R. M. Buchanan, whilst allowing that in some cases the clinical diagnosis could be a fairly confident one, was convinced that it was often unreliable. He quite agreed with the early use of the serum, especially in laryngeal cases, but until bacteriological evidence was obtained the use of the

serum was essentially an experiment.

Dr. Downie allowed that there were cases in which clinical examination might leave the most experienced doubtful. But, as he believed the serum to be harmless, and as in true diphtheria delay was full of risk, he would certainly use the serum in such cases. That a bacteriological examination is advisable he quite admitted, but to wait for the result of this before commencing treatment was to waste time that was all important.

# IV.—TONSILS FROM A CASE OF SO-CALLED MYCOSIS TONSILLARIS BENIGNA.

#### BY DR. WALKER DOWNIE.

On 12th October, 1894, I brought before this Society a man, aged 53, suffering from mycosis tonsillaris benigna (Glasgow Medical Journal, vol. xlii, p. 362). I showed that case because it was a well-marked example of the condition usually described under that designation, and because the line of treatment which had been pursued before he came under my care had been adopted, as is most frequently the case, under a mistaken diagnosis. The white patches associated with the condition are, as I then said, almost invariably mistaken for the secretion of acute follicular tonsillitis or for the local manifestations of diphtheria. That man had been treated as a case of diphtheria, while the patient whose tonsils I removed. and show to-night, had for weeks been under treatment for lacunar tonsillitis. The boy whose tonsils are now shown was 11 years of age. He had for some months complained of irritation of the throat, which had given rise to a short cough

or clearing effort, most frequently observed when his attention

was occupied with his studies.

Over the surfaces of both faucial tonsils were numerous white excrescences, varying in size from that of a pin's to head that of a hemp seed. There were also a few similar excrescences on each posterior pillar, and two on the right lateral wall of the pharynx. They were tough, and firmly adherent to the surface beneath, and they were unaccompanied by any evidence of inflammation. The boy's general health was excellent.

There is not much difficulty in the diagnosis if attention be given to the nature and appearances of the new growths and the condition of the parts around. The excrescences are usually fairly numerous and isolated; they are white, tough, and prominent, firmly adherent to the surface from which they spring, and are unaccompanied by local inflammation or constitutional disturbances. The condition is comparatively rare, and the cases, in my experience, occur much more frequently amongst private than amongst hospital patients.

Besides the cases described to-night, and the one shown here fully two years ago, I have seen four other well-marked cases. One, a lady, 20 years of age, was aware of having had white spots on her tonsils for fully three years. Another, a gentleman, 22 years of age, where both tonsils, both posterior pillars, base of tongue, and the pharyngeal wall were extensively involved, had only been aware of the presence of the excrescences for six weeks prior to the time when first seen by me. In another, a young lady, 15 years of age, the tonsils were covered with large white warty-like excrescences, the presence of which had been recognised two months previously, when she had been treated for diphtheria; and the fourth is a medical student, 19 years of age, whom I saw for the first time within the past fortnight. In his case the spots are few in number, and are distributed over both tonsils.

The condition has been described as a mycosis, and leptothrix has been looked upon as the exciting cause. Siebenmann, in 1895, demonstrated, by careful microscopical investigations, that the fundamental pathological condition is a cornification of the epithelium lining the tonsillar crypts, and proposed that the condition be termed hyperkeratosis lacunaris. Dr. A. Brown Kelly (in vol. ii of the Glasgow Medical Journal for 1896) published an interesting paper on this subject, in which the various cases recorded are reviewed, and his own observations, based on material obtained from his cases, are carefully

detailed. As a result, he is led to the same conclusion as Siebenmann—that whatever the cause, the condition does not depend on a mycosis.

In one tonsil shown to-night, the excrescences are seen over the surface, for the most part projecting from the mouths of

the follicles.

In the sections which were made for me by Dr. Ferguson, of the pathological department, Western Infirmary, masses of cornified epithelium are shown, both on the surface and in the lacunæ. It will be observed that the sections are chiefly composed of these epithelial masses, and that there is very little tonsil tissue intervening, so that the increase in the size of the tonsils is entirely due to the presence of these masses of laminated epithelium.

# GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

Session 1896-97.

MEETING VI.-8TH MARCH, 1897.

Dr. Robertson, in the Chair.

I.—CANCEROUS TUMOUR OF SIGMOID FLEXURE.

By. Dr. MIDDLETON AND Dr. WORKMAN.

A woman, aged 53, was admitted into the Glasgow Royal Infirmary on 2nd March, 1897, complaining of sickness and vomiting of three weeks' duration, but with a history of occasional vomiting of brownish material since November, Nine days prior to admission the abdomen within twelve hours became greatly swollen, and remained so without pain or tenderness. The abdomen was greatly distended and quite tympanitic. Just above Poupart's ligament, on left side, a hard tumour was felt, which could also be reached by the rectum. Constipation had been her habit, but the bowels were slightly moved several times after her admission. She died suddenly on 6th March, having for several hours suffered from great pain in the abdomen, and having had one attack of vomiting to the extent of only a few ounces. During the time she was under observation the temperature only once rose above 99°, reaching 101.4° on 3rd March. Digitized by Google Dr. Workman submitted the following pathological report:—
"On opening the abdomen it was found to be enormously distended with gas in the upper half, while the lower half was filled by the greatly distended colon and small intestine. The colon was ulcerated through in several places, and from it there has been a great escape of fæces. The fæculent matter had become dried over the surface of the omentum, while lower down it is fluid and moist.

"The liver lay in the posterior part of the cavity, and was pushed up with the diaphragm by the presence of gas; its surface has a remarkable appearance, being dark in colour, dry and shrivelled, as if it had been exposed to the air for several days.

"There was no appearance of acute peritonitis over the liver or over the omentum, but the loops of bowel lower down were inflamed and matted together by fibrinous material.

"In the left iliac region there was a tumour-like mass, consisting of the sigmoid flexure of the colon, which was adherent to the parietes, to the bladder wall, and to the uterus. In the outer part of the mass a small abscess filled with creamy pus was present, but this did not communicate with the lumen of the bowel. The sigmoid flexure is the seat of a large fungating malignant ulcer. No extension of tumour appeared to exist in the bladder or uterus."

Dr. Middleton pointed out that the sudden swelling of the abdomen probably concurred with the rupture of the bowel, and he remarked upon the extraordinary absence of pain and tenderness, and the almost complete absence of pyrexia. This was the first case of ulceration of the bowel with rupture arising from a fæcal accumulation that had come under his observation. The duration of life after the rupture was very remarkable.

#### II.--TUMOUR OF MEDIASTINUM.

# BY DR. MIDDLETON AND DR. WORKMAN.

The patient, a man, aged 52, had been in failing health for a year or more, losing flesh, and suffering from a slight cough. He was at work till three weeks prior to admission into the Glasgow Royal Infirmary, when breathlessness set in and cough became more severe. Spit was then purulent, and on one occasion he suddenly expectorated a large amount of pus. He lived for only a few hours after admission. A hurried examination discovered bulging of the left front, with absolute dulness all over left side, and extending from 2 to 3 inches to

right of middle line. On auscultation, the signs in the left apex pointed rather towards excavation, while at the base they were those of fluid effusion. The case was regarded as probably a mediastinal tumour with complications. Attention was directed very specially to the fact that this patient had been able to be at work up till three weeks prior to his death.

The following is the pathological report submitted by Dr.

Workman:-

"The specimen consists of the left lung, which is partially collapsed and small; the lower and anterior part of the upper lobe is the seat of a chronic cedematous pneumonia, and is very pale in colour and very solid; the middle part and the root of the lung is the seat of a solid tumour mass, which extends outwards through the substance of the organ and the pleura to the inner surface of the parietes, where there is a group of secondary nodules. A secondary mass is also present in the apex of the left lung.

"The right lung is a little adherent from old pleurisy, but

is quite free from tumour formation.

"A considerable tumour mass surrounds the great vessels at the base of the heart, but there is no extension into the pericardium nor into the lumen of any of the vessels.

"The tumour has probably originated in the mediastinum,

and extended into the root of the left lung.

"Except for a little interstitial nephritis the abdominal organs were healthy.

"It was not permitted us to examine the head."

#### III.—BOWEL IN ENTERIC FEVER.

#### BY DR. LINDSAY STEVEN AND DR. WORKMAN.

The specimen shows the lower part of the ileum, where the Peyer's patches are found to be very prominent and deeply inflamed. Many of them show most characteristic ulceration, with sloughing surface. The wall of the intestine is not thinned, and no perforation has occurred. The colon shows one or two small round ulcers, and there is some congestion of its mucous membrane. The mesenteric lymphatic glands are enlarged and congested.

During life, Widal's test gave positive results, and cultivations from the spleen after death gave numerous colonies of

enteric bacilli.

# IV.—A CASE OF SUCCESSFUL REMOVAL OF A LARGE SARCOMA OF THE BRAIN.

## By Dr. Eben. Duncan and Mr. Maylard.

A full report of this case appeared as an original article at p. 241.

Dr. Robertson congratulated the authors on the successful issue of the case, and, after eliciting the full dimensions of the tumour, remarked that such a large tumour is seldom removed with similar successful results.

Mr. H. E. Clark said he was struck with the large size of the tumour, and with the small amount of optic neuritis as ascertained by Dr. Fergus. In a case that came under his notice the pressure was much less, yet there was a great amount of optic neuritis; the lesion was in the leg area, and the localising symptoms were less reliable than the pain and tenderness on pressure.

Dr. Fergus said that optic neuritis is not due to pressure, but to some change in the optic nerve itself. He regretted that he had not taken the field of vision and the light reflex. In one case that came under his notice there was double optic neuritis with good visual acuteness, and tumour of the brain was diagnosed. Dr. Berry examined the patient and confirmed

the diagnosis.

Dr. Finlayson related a case he had seen recently of a man suffering from convulsive fits of a general character. There was a swelling of the skull near the motor area; this was due to an accident, the man having risen suddenly to his feet and knocked his head against a beam. The convulsions came on several months after the accident, and there was slight optic neuritis. There was no history of syphilis. After failing to ameliorate the patient's condition with anti-syphilitic remedies, trephining was resorted to; an extensive sarcoma was found passing through the dura mater. Great hæmorrhage took place, and the patient died the following day. The convulsions afforded no localising sign, but there was a local swelling caused by the sarcoma.

#### V.--A METHOD OF TESTING CONVERGENCE.

### By Dr. FREELAND FERGUS.

The function of convergence is usually described as consisting of two parts—a positive and negative. There is, first

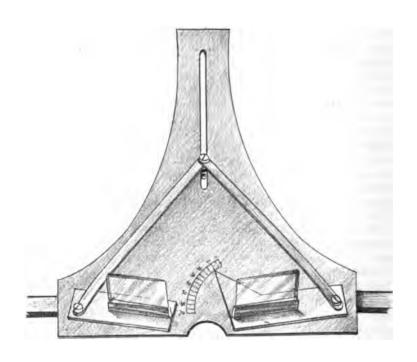
of all, a positive portion, by which a person who has sight in both eyes directs the visual axes of his eyes to any point situated between infinity and his near point of binocular fixation. There is, in the second place, what is always called the negative portion. It is easily proved that in normal circumstances the eyes have a certain power of divergence. Thus, when I place a prism with the base inwards in front of one eye, I can still see singly if the prism be weak. It is obvious that under such circumstances single vision can only take place if the eyes make an effort of divergence. The strongest prism which, with the base inwards, allows me to see single at a great distance measures the amount of my negative convergence. The sum of the positive and negative ranges of convergence is called the total range of convergence.

It can easily be understood that any defect in the positive element may be the occasion of asthenopia, but it is not so obvious why a defect of the negative part should lead to the same result, yet all clinical experience shows that in certain cases it is so. This is probably due to the position of anatomical rest being one not of parallelism. And here I may be pardoned for remarking that personally I have never been able to accept the proposition that the anatomical position of rest is one of divergence. Undoubtedly it sometimes is, but at other times does not seem to be so. Lately one of my old pupils, who happened to be house surgeon to Professor Macewen, sent me the following statistics of his observations on patients during deep chloroform narcosis:—Of 128 cases, in 40 divergence, in 16 convergence, in 67 parallelism, in 5 doubtful. If that be true, then in a certain number of persons the parallel position involves action on the part of the external recti. Therefore, any defect in the innervation of muscles may lead to asthenopia.

There are numerous methods of testing the positive range of convergence. Probably the best is the ingenious instrument devised by Dr. Landolt. For clinical purposes it is an excellent instrument, and tests with considerable accuracy the positive

element. The results are given in metric angles.

By measuring the positive range of convergence is meant estimating the power of the internal recti muscles—in other words, of the adductors. This can also easily be done by means of prisms. For example, suppose that in front of each eye I place a weak prism with the base outwards, then by the action of the internal recti muscles I can overcome the deviation of the prisms and get binocular fixation. The strongest prisms which I can overcome measure the positive



converging power of my eyes. In this method of estimating the power of the internal recti, the best test object is a spot of light placed at least 20 feet away from the person who is being examined, and approximately on a level with his head, for then the visual axes may be considered parallel.

Till recently, this maximum positive convergence was estimated simply by the use of the ordinary prisms in the trial case. Such an examination, however, could not be continuous, being necessarily interrupted at each change of prisms. Some years ago Dr. Landolt made practically continuous observations possible by adopting the well-known rotation prism of Herschel, which he also arranged to measure convergence and divergence either in prismatic strengths or in metric angles. This excellent instrument leaves little to be desired; it can be used to investigate both lateral and vertical binocular fixation. The instrument is, however, placed in front of one eye only, but I have thought it well to divide the prismatic action between the two. This is easily accom-

plished by placing a prism before each eye.

Every prism has an angle of deviation, which is a minimum. This angle is always called the angle of minimum deviation, and it may be expressed at pleasure in degrees or in prism dioptres or in hundredths of the radian. And here, in passing, it may be said that prisms should always be numbered according to the angles of minimum deviation, and not according to the apex angles. For each prism there is a certain position in which, if it be held in front of the eye, the deviation is at a minimum. Now, if the prism be slightly rotated from this position the deviation is no longer a minimum, but something greater. This new deviation obviously corresponds to the minimum of some other prism, and it is on this principle that I have constructed a convergence tester. In this instrument a weak prism is placed in front of each eye, the same strength of prism being used on each side. For the purpose prisms of apex angles of 2°, of 5°, or of 10° may be used.

The angle of minimum deviation of every prism is carefully determined with a spectrometer, as is also the apex angle. Since the angles are all small, their natural sines may be taken as equal to their circular measures. That this may be done without any appreciable error may be shown thus:—

Circular measure of  $2^{\circ} = .034897$ . Natural sine of  $2^{\circ} = .034906$ . .02 per cent error.



Circular measure of  $5^{\circ} = .08726$ . Natural sine of  $5^{\circ} = .08715$ .  $\cdot 12$  per cent error.

Circular measure of  $10^{\circ} = .17452$ . Natural sine of  $10^{\circ} = .17364$ . .5 (i. e.,  $\frac{1}{2}$ ) per cent error.

Therefore, for the prisms employed in this apparatus we may reckon the angle as being equal to the sine. Since that is the case, and the minimum deviation and apex angle are known, we can easily find the index of refraction of the glass of which the prism is made, for when the angles are all small  $\delta = (\mu - 1) i$ , where  $\delta =$  angle of minimum deviation and i = apex angle of prism. Placing these prisms one in front of each eye and rotating them about a vertical axis, through the same angle, we gradually increase the deviation produced. For each pair of prisms a table of reference can, without much trouble, be constructed, and a glance at the table will at once give the deviation corresponding to the degree of rotation.

It will suffice for the present purpose to work out the results for one set of prisms. I therefore select the medium, viz., those of 5°. These, although sent to me for 5° prisms, I find by measurement to be 5° 10′, and their angles of minimum deviation = 2° 40′. From this it follows that the index of refraction of the glass of which the prisms are made is 1.52, nearly.

For all prisms, calling the angle of incidence at the first surface  $\phi$ , the angle of refraction at that surface  $\phi^1$ , the angle of incidence at the second surface  $\psi^1$ , and the angle of refraction at the second surface  $\psi$ , it can easily be proved that  $\delta = \phi + \psi - (\phi^1 + \psi^1)$  (where  $\delta = \text{minimum deviation}$ ), and  $\phi^1 + \psi^1$  together is equal to the apex angle of the prism = i (say)—

 $\delta = \delta + \psi - i.$ 

When the incident ray strikes the prism so as to give minimum deviation, then  $\phi = \psi$ , and therefore—

$$\delta = 2\phi - i.$$

Consequently for the prisms with which we are dealing, the angle of incidence at the first surface which gives minimum deviation is easily found, for both i and  $\delta$  are known. We find this angle to be 3° 50′.

From this it follows that when the deviation is a minimum the line of incidence is not at right angles to a line joining the apex with the corresponding middle point of the base, but makes an angle with it of 88° 45′. Hence the starting point is not when the prism is exactly transverse, but with the apex nearer to the person than the base to such an extent that the bisecting line of the apex angle is at 88° 45′ to the line of incidence. Starting with this as the initial position, we now rotate the prisms so as to bring the indicator to the mark 5°. What is the new deviation of the prism? Here two cases require to be considered—(1) If the apex of the prism be rotated towards the person who is being examined, or (2) if it be rotated away.

Case I.—We have already seen that when the prism is placed before an eye to give minimum deviation, the line bisecting the prism angle makes an angle of 1° 15′ with a line drawn at right angles to the line of incidence. We have also seen that the apex end of the bisecting line is nearer to the person than the base end, and that the angle of incidence at the first surface is 3° 50′. By rotating the prism so that the indicator points to the mark 5°, and the apex relatively to the base approaches the patient, we have moved it through an angle of  $5^{\circ} - 1^{\circ} 15' = 3^{\circ} 45'$ . The angle of incidence at the first surface will therefore be  $3^{\circ} 50' + 3^{\circ} 45' = 7^{\circ} 35'$ . What, then, is the deviation in this new position?

That is easily ascertained by the formulæ— $\phi = \mu$  sine  $\phi^1$  and  $\psi = \mu \sin \psi^1$ . Given  $\phi = 7^{\circ} 35'$  and  $\mu = 1.52$ , then log.  $\sin 7^{\circ} 35' - \log. 1.52 = \log. \sin \phi^1$ .

$$\begin{array}{c} 9.120469 \\ & \frac{0.181844}{8.938625} = \log \sin \phi^{1}. \\ & \therefore \quad \phi^{1} = 4^{\circ} 58' \text{ to the nearest minute.} \end{array}$$

Having thus determined  $\phi^1$  we find that  $\psi^1 = 12'$  by the formula  $i = \phi^1 + \psi^1$ .

Thus we know  $\psi^1$ , and can easily get  $\psi$ .

$$\mu \sin \psi^{1} = \sin \psi.$$

$$\therefore \log 1.52 + \log \sin 12' = \log \sin \psi.$$

$$\therefore 181844 + 7.542906 = \log \sin \psi.$$

$$\therefore \psi = 18'.$$
But  $\delta = (\phi + \psi) - i = 7^{\circ} 53' - 5^{\circ} 10' = 2^{\circ} 43'.$ 

There is here only a very small increase of the deviation for this position of the prism.

The amount of deviation, however, increases with the angle of incidence, as is shown by the following table:—

Case I.— $\mu = 1.52$ . ANGLE OF PRISM = $i = 5^{\circ}$ 10	CASE I µ :	= 1.52.	ANGLE	$\mathbf{OF}$	PRISM	=i=	$5^{\circ}$	10
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READINGS OF SCALE.	φ	$\phi^1$	ψ1	ψ	DEVIATION.
1° 15′	3° 50′	2° 30′	2° 30′	8° 50′	2° 40′ *
5° 0′	7° 35′	4° 59′	0° 11′	0° 17′	2° 42′
10° 0′	12° 35′	8° 15′	- 3° 5′	-4° 41′	2° 44′
15° 0′	17° 35′	11° 28′	- 6° 18′	- 9° 36′	2° 49′
20° 0′	22° 35′	14° 38′	- 9° 28′	- 14° 29′	2° 56′
25° 0′	27° 35′	17° 44′	- 12° 34′	- 19° 19′	3° 6′
30° 0′	32° 35′	20° 45′	- 15° 35′	- 24° 6′	3° 20′
35° 0′	37° 35′	23° 39′	- 18° 29′	- 28° 48′	3° 37′
40° 0′	42° 35′	26° 26′	- 21° 16′	- 33° 27′	3° 58′
45° 0′	47° 35′	29° 3′	- 23° 53′	- 37° 59′	4° 26′
50° 0′	52° 35′	31° 30′	- 26° 20′	- 42° 24′	5° 1′
55° 0′	57° 35′	33° 44′	- 28° 34′	- 46° 37′	5° 48′
60° 0′	62° 35′	35° 44′	- 30° 34′	- 50° 37′	6° 48′
65° 0′	67° 35′	37° 28′	- 32° 18′	- 54° 19′	8° 6′
70° 0′	72° 35′	38° 53′	- 32° 43′	- 55° 14′	12° 11′
75° 0′					

<sup>\*</sup> Minimum for prism.

## CASE II.— $\mu = 1.52$ . ANGLE OF PRISM = 5° 10′.

SCALE READING.	φ`	$\phi^1$	$\psi^{_1}$	Ψ	DEVIATION
1° 15′	3° 50′	2° 30′	2° 30′	3° 50′	2° 40′
5° 0′	- 6° 15′	-4° 6′	9° 16′	14° 10′	2° 45′
10° 0′	- 11° 15′	- 7° 22′	12° 32′	19° 16′	2° 51′
15° 0′	- 16° 15′	- 10° 36′	15° 46′	24° 24′	2° 59′
20° 0′	- 21° 15′	- 13° 48′	18° 58′	29° 36′	3° 11′
25° 0′	- 26° 15′	- 16° 55′	22° 5′	34° 51′	3° 26′
30° 0′	- 31° 15′	- 19° 57′	25° 7′	40° 11′	3° 46′
35° 0′	- 36° 15′	- 22° 54′	28° 4′	45° 40′	4° 15′
40° 0′	- 41° 15′	- 25° 42′	30° 52′	51° 14′	4° 49′
45° 0′	- 46° 15′	- 28° 23′	33° 33′	57° 9′	5° 44′
50° 0′	-51° 15′	- 30° 52′	36° 2′	63° 21′	6° 56′
55° 0′	- 56° 15′	- 33° 10′	38° 20′	70° 32′	9° 7′

## VI.—SPECIMENS OF RECURRENT MALIGNANT DISEASE.

By Dr. Bratson and Dr. R. M. Buchanan.

Mrs. M., æt. 54, in March, 1891, complained of a tumour in the right breast. The disease seemed local. In July, 1891, the whole breast was removed. She was seen on several occasions, and the scar remained sound, and there were no enlarged

glands in the armpit. She remained well until November, 1896. On 15th January last, she had several nodules in the subcutaneous tissue over the deltoid, and one nodule was removed and found to be colloid cancer. The old record was looked up, but was found to be incomplete. The patient became unconscious and hemiplegic, and died.

Dr. R. M. Buchanan made the post-mortem examination. The body was obese. The scar in the breast and the axillary glands were free from tumour. There were masses and nodules of tumour tissue in the deltoid and in the thigh. The left lung was adherent, and there were large masses of cancerous growth in the apex of the lung. In both lungs there were diseased nodules. In the abdomen there was found a large solitary tumour of the omentum; one large solitary cystic tumour in the spleen, and numerous tumours in the kidneys. There were ulcers in the stomach and the intestines, and distinct nodules were present in the jejunum, and at the lower end of the rectum. The brain also presented a large number of tumours, some involving the membranes, others the brain tissue; the tumours in the cortical tissue contained large blood-clots. Dr. Buchanan thought the case important on account of the late appearance of recurrent growths, and the method of dissemination as indicated by the lesions.

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Mr. Maylard said the original tumour had not been found, and he regarded this as strange, since colloid disease of mamma is very rare. He doubted if the tumour got into the resophagus and became disseminated along the intestine, as the ordinary way is by means of the blood current.

## VII.—RECTUM EXCISED BY SACRAL OPERATION FOR COLLOID CANCER.

#### BY DR. BEATSON.

In this case colotomy was performed in the first instance, but as excruciating pain became a prominent feature, the whole rectum was excised, and the pain entirely got rid of.

Drs. Renton, Clark, and Maylard discussed the case in all its aspects and the two latter disagreed with Dr. Beatson as to the necessity of the second operation, but the latter justified his operation on palliative grounds.

### GLASGOW EASTERN MEDICAL SOCIETY.

#### Session 1896-97.

MEETING V.-10TH FEBRUARY, 1897.

The President, Dr. ALEX. PATTERSON, in the Chair.

Dr. A. R. Ferguson read a paper on "The Serum Reaction in Typhoid Fever as a Diagnostic Sign."

DR. MARSH, of Belvidere, demonstrated the method of

carrying out the reaction.

## MEETING VI.-10TH MARCH, 1897.

The President, Dr. ALEX. PATTERSON, in the Chair.

DR. JOHN M'DONALD (Duke Street) read a paper on "Dyspepsia." He commenced by briefly reviewing the more recent methods of diagnosis in diseases of the stomach as practised by Ewald, Boaz, Leube, and others, and, while admitting that the conclusions of digestive experiments must always be received with some reserve, owing to the difficulties in the way of an artificial simulation of the actual conditions present in the stomach, emphasised the importance of an acquaintance on the part of the general practitioner with the general results obtained in different types of dyspepsia.

Representing varieties of dyspepsia as characterised by two main classes of symptoms, on the one hand irritative, on the other atonic, while not defending such a classification on any but clinical grounds, Dr. M'Donald proceeded to consider seriatim the indications for treatment as obtained by examina-

tion of the stomach contents in different varieties.

He condemned the indiscriminate prescription of artificial digestive ferments, on the grounds: (1) that commercial preparations of such were for the most part inert; and (2) that cases where a deficiency of gastric secretion had been conclusively shown to be present formed a small minority.

A proper system of diet, an intelligent manipulation of alkalies and hydrochloric acid, and, in suitable cases, the predigestion of food, with attention to general conditions, con-

stituted the main lines of treatment.

#### REVIEWS.

Gout and Goutiness, and their Treatment. By WILLIAM EWART, M.D. Cantab., F.R.C.P. Lond., M.R.C.S. Eng. London: Baillière, Tindall & Cox. 1896.

We have glanced through this work with pleasure, and also, we admit, with a sense of relief. A reader in this northern city, where genuine gout is a rarity, cannot but contemplate with some uneasiness the duty of perusing a treatise of six hundred pages on that disease. But the difficulties that loom so large in the distance dwindle greatly as they are approached. The excellent paper and printing, the evidence of careful proof-reading, and the lucid style, no doubt, impress the reader favourably; but, above all, it is the diffuseness of style that makes a rapid survey of the work so easy. This feature, of course, has its objections. It takes time to examine the text, and trouble to turn over the leaves, and we fear that the very bulk of the volume may deter some from purchasing it for their private libraries. Here, if anywhere, it seems to us condensation was not only allowable, but highly desirable.

We give the titles of the ten sections into which the work is divided, although these give but a faint idea of the very various aspects from which the subject is studied in the sixty-four chapters:—I. Introduction; II. The Theories of Gout; III. The Chemistry of Gout; IV. The Morbid Anatomy of Gout; V. The Pathology of Gout; VI. The Clinical Study of Gout; VII. General Conclusions; VIII. The Treatment of Gout and of Goutiness; IX. The Medicinal Springs; X. Diet and Hygiene in the Prophylaxis and Treatment of Gout.

The historical point of view is not neglected; the manner in which it is treated confers on the work part of its value. Neither can the charge of egotism be brought against Dr. Ewart; the pages bristle with the names of other investigators, but the author of the book keeps himself well in the background. It would, indeed, have been refreshing rather than otherwise to meet with more evidence than we have found of his own thinking and experience. Dr. Ewart certainly gives us his notions on the general subject of gout, but apparently his attitude is judicial and not experimental. He does not base his theory of the disease on facts brought together from his own experience, but he puts together the experience and theories of original observers and other writers, weighs the

evidence and adopts a theory to suit the inference. The work, therefore, has its value, not in its originality, but as being a well written, critical compilation of our present knowledge of gout. It contains abundant evidence of extensive reading and of familiarity with the writings of others upon the subject of which it treats.

A First Series of Fifty-Four Consecutive Ovariotomies. By A. C. BUTLER-SMYTHE, F.R.C.S. Ed., F.R.C.P. Ed. London: J. & A. Churchill. 1897.

This little volume is a report of fifty-four consecutive cases of ovariotomy, with fifty-three recoveries, and may be said to consist of two parts, in the first of which Mr. Butler-Smythe describes the method adopted by him in the preparation and after-treatment of his patients; the second part consists of a description of the individual cases. We notice that he most strongly condemns the use of chloroform as an anæsthetic. stating that he never feels comfortable when operating on a patient who is under its influence, and that ether is a much safer anæsthetic. In this Mr. Smythe differs from the majority of abdominal surgeons, who hold that, while the danger is about equal in either case, with chloroform you get complete relaxation of the abdominal walls, which is not always obtained with ether. Mr. Butler-Symthe uses sulphur (sulphur fumes?) as a disinfectant for his operating room. mind this is a useless procedure, and we hold that the only way to thoroughly disinfect a room is by steam, and if this cannot be managed, having it well washed down is sufficient.

One of the most interesting of the cases is one in which, on the eighth day after the operation, an enema of 10 ozof olive oil was given. By mistake a pint and a half of soap and water was given after the oil, and there being no immediate action of the bowel, this was followed by another injection of soap and water, the result being that the rectum burst and the fluid came through the drainage-tube in the abdomen, saturating the dressings. On the thirteenth day after the operation, and the fifth following the accident, the patient became maniacal, and remained so for about six weeks. She ultimately, however, made a good recovery.

We congratulate Mr. Butler-Smythe on his results, and recommend the perusal of these cases to those of our readers

who are interested in this subject.

The Anatomy of Labour, including that of Full-Time Pregnancy and the First Days of the Puerperium. Exhibited in Frozen Sections. Reproduced ad Naturam by A. H. F. BARBOUR, M.A., M.D., F.R.S.E., &c. Twenty-Six Plates, with Descriptions. Third Edition. Edinburgh and London: W. & A. K. Johnston. 1896.

THE present edition of this standard atlas, as the author states, "represents all the work that has been done in this department up to the present year." To the drawings from frozen sections made by the author have been added, in this third edition, the original and hitherto unpublished drawings of the frozen sections from pregnancy and labour, made by himself and Dr. Clarence Webster, and described in Vol. II of the Laboratory Reports of the Royal College of Physicians of Edinburgh. As in former editions also, to make the atlas as complete as possible, plates with a brief description of all sections published by other observers have been included.

The few notes accompanying each figure bring out clearly and concisely the points to be noticed, so that the reader will

find no difficulty in understanding all the illustrations.

Of the scientific value of a work such as the present there can be no question; but even estimating it from a much lower standpoint, from a purely utilitarian point of view, we are inclined to consider it a most useful production, for few obstetricians have an opportunity of studying the anatomy of pregnancy and labour in the ideal way—i.e., by dissection.

We have, therefore, much pleasure in heartily commending this work to any specially interested in obstetrics. The colouring of the plates is good, and the price of the volume is

very moderate indeed.

Lectures on Renal and Urinary Diseases. By ROBERT SAUNDBY, M.D. Edin. With Numerous Illustrations. Second Edition. Bristol: John Wright & Co. 1896.

This volume represents a second edition of the Lectures on Bright's Disease and the Lectures on Diabetes which were originally published as separate works. A new section is added on stone in the kidney; hydronephrosis, pyonephrosis, and pyelitis; and hæmaturia and hæmoglobinuria. It is not too often the case that a second edition of lectures on medical subjects is called for, and we congratulate Dr. Saundby on the demand for his works, which this tasteful volume is intended to meet.

To refer only to one detail in the matter of this book, we are glad to recognise a new paragraph in which Dr. Saundby, alluding to the relation of "functional" albuminuria to life insurance, says—"The time has come to declare that only ignorance of the facts can justify the continued refusal to accept cases where the albuminuria is clearly dependent only on the erect position or on exercise, and the applicant in all other respects satisfies the required standards." The evidence appears to be growing that this form of albuminuria depends on disturbance of the equilibrium of the renal circulation. Quite recently the writer of this notice had under observation a young gentleman whose urine, normal in the early morning, contained a large quantity of albumen after breakfast. patient, who was in the habit of examining his urine, had not noticed that differences in the amount of exercise affected it. but when he was confined to the recumbent posture by a sharp attack of influenza, he found that albumen remained absent.

There can be no doubt that large numbers of applicants for life insurance and for public appointments have suffered unjustly through the discovery that they have albuminuria, or glycosuria, or a cardiac murmur, but medicine has gained much in this way, and probably a later generation of candidates will gain too.

In the concluding volume of the first series, Dr. Billings, in his preface, indicates the cessation of his labours, in this

Index-Catalogue of the Library of the Surgeon-General's Office, U.S. Army. Authors and Subjects. Vol. XVI: W—Zythus. Washington. 1895.

Index-Catalogue of the Library of the Surgeon-General's Office, U.S. Army. Authors and Subjects. Second Series. Vol. I: A—Azzurri. Washington. 1896.

<sup>&</sup>quot;The king is dead, long live the king!" In library catalogues as in monarchies, the end of one series or reign is but the occasion for another to begin. Happily, it is so in this wonderful Catalogue. When its first volume appeared, one could not help wondering whether the energy, perseverance, and boldness which had produced it, could possibly carry it through to a completion. Difficulties arose, financial amongst others; but the enlightened views of the American Government faced the expense; they have not declared for "finality," but have courageously encountered the difficulties of a new series.

sphere, and, in doing so, says—"I can only say that it has been to me a 'labour of love,' and that I am very thankful that I have been allowed to complete it so far as the first series is concerned." We are sure that many in this country, and throughout Europe, will join in congratulating Dr. Billings on his completion of the gigantic task he set himself, and will wish him further success in the new sphere of labour to which he has gone. We can ungrudgingly approve of his having this change, inasmuch as the work now goes on, as before, under the care of Dr. D. L. Huntingdon.

This Index-Catalogue has been reviewed in these pages from time to time by the present writer since the first announcement of it appeared, so that no new views need be expected here. In vol. xvi, however, it may be stated that there is an "Alphabetical List of the Abbreviations of Titles of Medical Periodicals employed in the Index-Catalogue." This supplies a fuller list of the periodicals indexed than any previously given. In the volume before us, this list is bound up with the Catalogue; but we have also seen it in a separate volume, so that librarians should make sure that their set is complete.

There is also at the end of the volume a list of "Corrigenda." Errors in such a work are inevitable, and although we have in the course of the publication detected not a few, it has been a constant source of astonishment to see how correctly the work was printed.

We do not mean to disparage in any way the great value of American contributions to medical literature when we say that we consider this *Index-Catalogue* (with the allied *Index Medicus*) to be the greatest contribution to medical literature from America which has yet appeared, for its benefit will extend to all time, and its value be felt in all countries.

King's College Hospital Reports. Edited by NESTOR TIRARD, M.D., W. WATSON CHEYNE, F.R.C.S., JOHN PHILLIPS, M.D., W. D. HALLIBURTON, M.D. Vol. II (1st October, 1894, to 30th September, 1895). London: Adlard & Son. 1896.

THE first volume of these reports was favourably reviewed in the forty-fifth volume of the Glasgow Medical Journal, at pp. 227, 228. The second closely resembles its predecessor. The plan of the reports is practically the same, except that the editors have introduced a new topographical directory of subscribers, which they believe will add largely to the utility

388 Reviews.

of the volume. We note, also, with pleasure, that the number of subscribers has increased since the first issue.

In addition to the reports from the various departments of the hospital-surgical, medical, pathological, &c.-there are notes on cases of special interest, some of which are of considerable value. There is, also, as in the first volume, a series of original articles, of which we simply give the titles, as none call for special mention. Dr. Curnow completes his historical sketch of "King's College and King's College Hospital;" Dr. Nestor Tirard writes a short article on "Intermittent Pulse;" Dr. Norman Dalton, "Notes on Abscess of the Liver." next contributions are on the "Diagnosis and Prognosis in Cases of Valvular Disease," by Sir Hugh Beevor, Bart., M.D., and on the "Sterility of Wounds," by G. L. Cheatle, F.R.C.S. The importance of inquiring into the condition of the urethra in cases of arthritis is emphasised in a short article by Dr. T. Sydney Short entitled, "On the Association between Urethritis and Subacute Inflammations of Joints." The concluding communication is a short résumé entitled. "Antitoxins and Antitoxin Treatment," by Richard T. Hewlett.

The Enlarged Cirrhotic Liver. By ARTHUR FOXWELL, M.A., M.D., F.R.C.P. Birmingham: Cornish Brothers.

THE two essays contained in this little volume are due to the author's conviction that an unnecessary amount of difficulty surrounds the physical determination of the condition of the liver in cirrhosis, and especially in alcoholic cirrhosis. "Clinically, the alcoholic, as well as the other forms, is characterised by an enlargement of the organ, those cases where diminution is noted being quite the exception. It is true that contraction, when it does occur, means an advanced stage of the disease; but even in the severest forms, enlargement remains the rule." This doctrine is illustrated by references to, and statistics based upon, a large number of cases.

Angio-Neurosis: being Studies in Diseases of the Vaso-Motor System. By W. RAMSAY SMITH, M.B., C.M., B.Sc. Bristol: John Wright & Co.

This work consists of eleven chapters, some of which have already appeared in print elsewhere. One of the principal objects which the author has in view is to describe two

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diseases which he believes have escaped notice heretofore. The first of these he terms "general angio-neurotic cedema;" among its characteristics are "high temperature, certain subjective sensations, hyperæmia of the skin, and subsequent desquamation." The other is designated "ervthema-urticaria," and is regarded as a constitutional disorder with a local manifestation. Reference is made to numerous cases of curious vaso-motor affections.

Food in Health and Disease. By I. Burney Yeo, M.D., F.R.C.P. With Illustrations. New and Revised Edition. London, Paris, and Melbourne: Cassell & Company, Limited. 1896.

THE first edition of this work appeared in 1889, and was reprinted four times before the present revised edition was published last year. It is obvious, therefore, that the book has commended itself to a large number of readers, and has become fairly independent of the comments of the reviewer. We are glad, however, to have the opportunity of calling attention to the new issue of this excellent manual.

Die Pathologie der Schutzpocken-Impfung. ["The Pathology of Vaccination." By L. Fürst. Berlin: Oscar Coblemez. 1896.

This work is a tribute to the memory of Jenner, the centenary of whose great achievement has been so recently celebrated. Attention is called in the preface to the contrast between Jenner's discovery by the empirical method and that of Behring, who, following on the lines laid down by Pasteur and Koch, arrived, a hundred years after Jenner, at a result of a similar beneficial nature by a long course of purposeful labour.

The first chapter is of a general kind, dealing with vaccination and serum-therapy, humanised and animal vaccine, the specific contagium, local and general symptoms, first and repeated vaccinations, and statistics.

The second chapter treats of the symptomatology and

course of normal vaccinia.

The third deals with anomalous and morbid symptoms following on vaccination (auto-inoculation, abnormal local

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conditions, and general anomalies). In the next chapter various untoward infections are considered (cutaneous and otherwise), whilst the fifth chapter discusses the hygiene of vaccination, and the prophylaxis of vaccinal diseases. A bibliography and index conclude the work.

On Deufness, Giddiness, and Noises in the Head. By EDWARD WOAKES, M.D. Lond.; assisted by CLAUD WOAKES, M.R.C.S., L.R.C.P. Part I. London: H. K. Lewis. 1896.

THERE is no doubt that this book serves a useful purpose. Practitioners and even aural surgeons are often at a loss with regard to cases of giddiness and tinnitus, and there are cases of progressive deafness which baffle the skill of even the most experienced aurists. Now, without pretending to cure all these troublesome cases, Dr. Woakes attempts a scientific classification of them, and as this must be the first step towards their successful management, we heartily welcome this book. The fact that this is a reissue of the work shows that the efforts of the author have been appreciated by the medical profession.

The work opens with a discussion of the much vexed question of the localisation of the seat of the function of equilibration, and the author adheres to the opinion, supported by the recent work of Ewald, that this is to be found in the labyrinth in the cristæ acusticæ of the ampullæ, and the maculæ acusticæ of the

utricle and saccule.

Chapter II deals with the symptomatology of vertigo, and classifies it as—(1) stomachic; (2) due to Ménière's disease; (3) due to nasal disease; or (4) due to ear disease. Dr. Woakes gives a clear exposition of the etiology of stomachic vertigo. We are inclined to think that he exaggerates the importance of ethmoiditis as a cause of progressive deafness, and our experience is that a large number of these cases occur in which there is no cause in the nose, and for which nasal treatment is useless even in the early stages. Still, we believe that Dr. Woakes has done a distinct service in emphasising the connection between nasal diseases and progressive deafness.

The later chapters of the book deal with causes of tinnitus in the middle and external ears, and with the ear affections of infancy and childhood. Post-nasal growths are fully discussed, but a larger selection of the mechanical means for the removal of these might with advantage have been given. A short selection of formulæ is given at the end of the volume. The

book is well printed, and has a copious index. Altogether, the work is a very valuable one, and throws a clear light on a very difficult subject.

Refraction of the Eye. BY A. STANFORD MORTON. Sixth Edition. London: H. K. Lewis. 1897.

It is almost unnecessary to say anything in commendation of a book which has passed through five editions. So far as it goes this little book forms an excellent guide to the estimation of the refraction of the eye, and cannot fail to be of great service to a student beginning his studies. It is, however, only a book of directions as to refraction testing, and cannot in any sense be called an adequate discussion of the refraction of the eye. That this volume should have passed through so many editions serves to show that it amply meets a felt want; at the same time the fact of its doing so indicates that there are still very many who prefer to be guided simply by rule rather than to have a first-hand knowledge of the principles of the science which they profess.

We doubt very much the propriety of the author leaving out all notice of the modern methods of ophthalmometry. Ophthalmometers of various forms are now to be seen in all clinics, and thus the large majority of students are more or less familiar with their use. While it is true that no sensible man would venture to order glasses by such an examination, yet it is equally true that the assistance to be derived from such an investigation is very great.

Notes on the More Common Diseases of the Eye. By R. W. Doyne. London: H. K. Lewis. 1897.

THE apology for the publication of this book is that it is suited to the requirements of the busy practitioner. All we can say is that any practitioner who is so busy that he has to fall back on a book of this sort is doing a very wrong thing to interfere at all with ophthalmic work. Mr. Doyne is worthy of all respect as an honourable man and as an intelligent practitioner, and therefore it is to be much regretted, for his own credit, that he has attempted to deal with such a large number of subjects within the compass of forty small pages.

We cannot think that any good purpose is served by the publication of such books.

Skiascopy. By Edward Jackson, M.D. Philadelphia: Edwards and Docker Company. 1896.

This is an excellent book, and we have every confidence in highly recommending it to ophthalmic surgeons and to students. It is probably the best practical exposition of the shadow test in the English language. The style of the author is lucid and clear, and in that respect differs most agreeably from the slipshod work which too often comes from the other side of the Atlantic. Dr. Jackson does not forget that good material loses nothing by being served up well.

Probably no simpler explanation of the somewhat intricate phenomena on which skiascopy is founded could have been written, and it is given with a breadth of grasp which

deserves high praise.

The author's suggestion that the learner should always begin with eyes of known refractive power, and study in them the conditions of reversals of shadows, will be to most a new idea, and one which ought to be adopted. By following it the student cannot but gain a knowledge of the subject which will stand him in good stead in the most complicated cases. By most other methods he is apt to acquire a mere rule of thumb method of working, and will probably never have that insight into the subject which is so desirable.

Some of the diagrams might be improved, but in the main

they partake of the excellence of the book.

Archives of Clinical Skiagraphy. Edited by SYDNEY ROWLAND, B.A. Camb. London: The Rebman Publishing Company, Limited. 1896.

THE first number of this important periodical publication appeared in May, 1896, and the third in December last. To all interested in the practical application of the x rays, these archives will be of great interest, not only as showing what can be done, but also as a permanent record of progress. In all, eighteen plates have now been published of various injuries and diseases of the bones, some of them wonderful in the distinctness of detail which they exhibit. A note is contributed to the December number by Dr. John Macintyre on the photography of soft tissues, along with a plate showing an outline of the heart. The plates and the letterpress alike are most creditable to the editor, the contributors, and the publishers alike.

Prize Essays on Leprosy. By NEWMAN, EHLERS, and IMPEY. London: The New Sydenham Society. 1895.

THESE "Essays" form valuable contributions to the literature of this disease. We have had recently occasion to consult Dr. Newman's History of Leprosy in the British Islands, and have found it to be full, accurate, and interesting in every respect. Dr. Ehlers treats of the conditions under which leprosy has declined in Iceland, and Dr. Impey reports on the facts as to the recent increase of leprosy at the Cape and its prevalence in South Africa.

An alphabetical index would have been a very valuable

addition to the volume.

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Thirteenth Annual Issue. London: Charles Griffin & Co., Limited. 1896.

This has now become a large and important volume, and we have great pleasure in most cordially recommending it to the notice of the Glasgow medical societies. Section XIV is devoted to medicine, and is in every respect full and satisfactory. We hope that the Glasgow secretaries will not fail to send in their returns to the Messrs. Griffin, who deserve every praise for their enterprise in issuing so important a year-book.

# ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### SURGERY.

By GRANT ANDREW, M.B., C.M.

Aids to Cerebral Localisation.—Dr. Eskridge offers as aids in topical diagnosis a group of five speech defects, an interesting series of symptoms that might be almost indefinitely extended, but the more valuable

are among those summarised below :-

1. If the lesion is in the foot of the third left frontal (Broca's) convolution in right-handed persons, and in the corresponding portion of the brain on the opposite side in left-handed individuals, the patient will be unable to speak voluntarily, to repeat words after another, to read aloud, to think in speech, and, in the majority of cases, to write voluntarily or from dictation so as to be understood, but he can understand the speech of another. He usually will be able to understand gesture expression.

2. A lesion in the oro-lingual centre (lowest portion of the central convolutions) will cause paresis or paralysis of the oro-lingual muscles, including the lower side of face, and imperfect articulation; but the patient will be able with a

decided effort to repeat words after another, to talk voluntarily, to think in speech, and to write, although the letters may be imperfectly formed. is, as a rule, no omission or transposition of letters or words, unless the lesion is sufficiently extensive to affect the adjacent cortical centres or their commissural fibres. It is possible that this centre is bilateral, that a lesion on either side may give rise to somewhat similar symptoms, and that the loss of function in the affected muscles will not be completely abolished from a unilateral lesion.

3. A lesion in the foot of the second frontal convolution on the left side in right-handed persons or on the right side in left-handed individuals (the probable orthographic centre) will be attended by disturbances in writing, consisting of inability to write from inability to spell. In the only case reported of this character, the patient formed all the letters of the alphabet perfectly, but he omitted, transposed, and substituted letters to such an extent that his writing was unintelligible. He wrote well if the words were spelled for him.

4. A limited lesion in the posterior two-thirds of the first and second temporal convolutions will be attended by word-deafness and inability to write to dictation—pure word-deafness. In a more exhaustive lesion in this region, mind-deafness, with paraphasis and some disturbance in reading and writing, will be added. The greater the extent of the cortical and sub-cortical areas involved the more marked the paraphasia and other symptoms of sensory

aphasia.

5. A lesion involving the angular gyrus and adjacent parts will cause word-blindness-inability to read, defects in writing, copying, and in speaking, In these cases paraphasia is often present. If the lesion affects the parts posterior to the angular gyrus, mind-blindness may be added.—(See Clinical Journal, 31st March, 1897).

The Knee-Jerk in Cases of Transverse Lesion of the Spinal Cord.—Freyberger, in Treatment, reviews a paper by Abel (Archiv. für Psychiatrie und Nervenkrankheiten) based upon a consideration of twentyone cases, and gives the following summary :-

1. Complete lesion of the cervical or upper or middle dorsal region of the spinal cord causes loss of tendon reflexes, accompanied by paralysis of bladder

and rectum, but not in all cases loss of sensibility of the skin.

2. Simple compression of the cord at the same level may cause similar

3. Compression of the cord can produce loss of tendon reflexes, while the sensibility of the skin remains intact or is only slightly impaired.

4. Operation may be advisable in those cases where cutaneous sensibility is preserved.

He does not think that complete absence of cutaneous sensibility contraindicates operation, because a similar ansesthesia of the skin may exist without

any spinal lesion whatever.

The author agrees with Bastian, Thorburn, and Bruns that, in all cases of complete lesion of cervical or of upper dorsal region of the cord, the tendon reflexes are absent and the bladder and rectum paralysed, notwithstanding the presence of descending degeneration of the pyramidal tracts.

End-to-End Suture after Resection of Blood-Vessels injured in Continuity.—J. B. Murphy, of Chicago, reports (Med. Record, 16th January, 1897; noted by Gibson in Annals of Surgery, April, 1897) two cases in the human subject where vessels were sutured with good result.

In the first case the femoral and internal saphenous veins were perforated by a pistol bullet. They were exposed by incision, and the wounds in the saphenous vein were sutured with a continuous silk suture; the wounds in the femoral vein, after double ligature of the profunda branch, were likewise sutured. At the end of five weeks, during which deep free suppuration had been going on in the wound, evidences of extensive active hæmorrhage

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developed, which, on laying open the parts, was found to come from a slough on the inner side of the femoral artery for an inch in extent. The artery was ligated above and below the damaged area, which was resected. Recovery followed without ædema or other evidence of circulatory disturbances in the limb.

In the second case the common femoral was perforated by a pistol bullet, which passed through the centre of the vessel at a point about 1½ inch below Poupart's ligament. The bullet carried away the greater portion of the walls of the artery, and passing downward and backward perforated the femoral vein just above the junction of the profunds. The artery was temporarily secured by clamps while the vein was sutured. By the suturing the calibre of the vein was greatly diminished, but soon it dilated to about one-third its normal diameter. Two inches of the artery were then exposed and freed, and half an inch of its continuity was resected, including the wound opening. The proximal end was deprived of its adventitia for one-third of an inch and then invaginated into the distal end to that extent by four double-needled threads which penetrated all the coats of the artery. A row of sutures was placed around the overlapping distal end, the sutures penetrating only the media of the proximal portion. The adventitia was then drawn down over the line of union and sutured, and the clamps were removed. Not a drop of blood escaped at the line of suture, and pulsation was immediately restored in the vessels below. No cedema of the leg followed, and the circulation was good continuously from the time of operation. The wound suppurated, but healed satisfactorily. The author reports the details of a large number of experiments on animals in resecting and suturing blood-vessels.

He concludes that the procedure is only applicable to large-sized vessels, and gives the caution that the vessels must be handled with great care and delicacy to avoid thrombosis and injury to the intima and consequent inflammatory complications. The indications for the procedure are found in injuries to large vessels, whether operative or accidental, and in treatment of certain

aneurysms of traumatic origin.

#### DISEASES OF THE EAR.

#### By Dr. WALKER DOWNIE.

Oto-Massage. By Chevalier Jackson, M.D., l'ittsburg.—In this paper Dr. Jackson divides the methods which may be adopted into three classes:—(1) Exercise of the sense of hearing by means of sounds produced with apparatus or by the voice; (2) direct mechanical massage by means of probes or similar instruments brought in contact with the membrana tympani; (3) massage by means of a column of confined air in contact with the tympanic membrane.

The first, he thinks, has yielded little, if any, temporary, and absolutely no

permanent benefit.

The second method, advocated by Lucae and others, is often very painful, and occasionally leads to injury, such as displacement inwards of the membrane, jamming of the stapes, and increased labyrinthine pressure.

The third class of procedure, "pneumatic massage," is described in detail, and may be practised by any of the following methods, but most satisfactorily by the last on the list:—By negative pressure, produced by absorption of air after occlusion of the external auditory meatus with a plug of cotton impregnated with cocoa butter; by manipulation by the patient's finger inserted in the meatus or applied to the tragus; by Siegel's speculum operated by mouth, syringe, or air-bag; by rubber tube and ear tip operated by mouth, syringe, or air-bag; by Delstanche's masseur; or by a well-constructed mechanical masseur acting on the piston principle.

Each of these various methods is described in detail by the writer, who

thinks that none of them yields the same good results as are obtainable from a properly designed pneumatic masseur, which is safe and painless in its application, and beneficial in a fair proportion of cases. His opinion of the essentials in such an instrument are controllability of the energy and frequency of the stroke; capability of always being started on the exhaust stroke; valves so arranged that rarefaction recurs at every stroke, and compression is an impossibility. An instrument which he employs, designed to fulfil those conditions, is described. Pneumatic massage of the tympanic membrane must be performed with the greatest gentleness; the instrument, after being adjusted, should always begin on the exhaust stroke, so that the first movement draws the membrane outwards, and there should never be more than 150 to 200 exhausts per minute. Short sittings are recommended, and the patient should never be permitted to have control of the instrument, as he invariably overdoes the application, and the result is permanent injury to the parts.—(The Laryngoscope, January, 1897.)

Otological Peculiarities of the Negro.—The concha in the negro, according to Dr. Roaldes, is smaller and more fleshy than in the white. The outlines of elevations and depressions on the auricle are less graceful in the negro; the concha is more closely applied to the skull than in the white; and the external meatus is more spacious and much straighter in the negro. The mastoid apophysis is less developed, the cortical portion is harder and thicker, and the antrum is smaller in the negro; while the naso-pharynx is much more spacious and the mouths of the Eustachian tubes are much larger than in the white man. The negro's nasal septum is seldom deformed, being usually regular and free from deflections. He is much less prone to eczema of the auricle and meatus, but is more liable to keloid degeneration. Deafness from all causes and deaf-mutism are much less common among negroes than amongst whites.—(Rev. de Laryngol. et d'Otologie.)

Otitis Media Serosa, or Sero-Mucous Catarrh.—Dr. S. C. Ayres, of Cincinnati, here gives details of four cases of otitis media serosa, a condition which he says may probably be regarded as a "chronic sub-acute inflammation," as it has periods of exacerbation and partial recovery extending over weeks or months. It occurs in the course of an inflammation of the naso-pharynx, and is not usually painful until the tympanum becomes fully distended with sero-mucus. The first of his four cases was of a chronic character, continuing for three months with varying symptoms, sometimes with vertigo. Latterly there was considerable pain and marked bulging of the drum-head. Evacuation of the fluid by paracentesis was followed by immediate relief. The second and third cases were very similar, though of shorter duration, and accompanied by less pain. In the fourth, the retained fluid only half-filled the drum-cavity, and inflation sufficed to drain away the fluid and to restore hearing.—(The Laryngoscope, March, 1897.)

## GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

Saline Subcutaneous Injection.—Dr. George S. Brown contributes an article detailing his experience of this method of treatment to the New York Medical Journal, 20th March, 1897. The cases recorded in this paper are not directly gynecological, but they bear on the general question of saline injections in septic and other toxic conditions, including pneumonia. Dr. Brown draws attention to the fact that if large quantities of fluid are injected through a small aspirator needle there is considerable cooling, so that fluid injected at a temperature of 104° F. must usually be about 130° in the flask or other

receptacle from which it flows. He uses a 6 per cent solution of salt, filtered, and boiled in Florence flasks stoppered with non-absorbent cotton wool. In injecting the fluid it is well to stop occasionally till some of the fluid has been absorbed, so that a whole litre of fluid may be injected at one spot.

Dr. Maygrie also reports successful cases of this method, though he prefers intravenous injection, especially in the cases of "acute anemia" following hemorrhage. He prefers the median vein in the fore-arm as the site of injection on account of local thrombosis occasionally following on injections into the veins of the lower extremities.—(Quoted in Centr. f. Gauge., p. 285)

into the veins of the lower extremities.—(Quoted in Centr. f. Gynec., p. 285.)

Dr. Solé reports some cases (Presse Médicale Belge, January, 1897) of subcutaneous saline injections in eclampsia. This method has been lately employed in Glasgow, and the case though terminating in death was temporarily benefited. It seems of use in those apparently hopeless cases where after delivery the coma deepens and the temperature rises.

Camphor as an Antigalactic.—Dr. Herrgott (quoted in New York Medical Journal, March, 1897) states that he has used camphor in about thirty cases with remarkable results in diminishing the secretion of milk. He uses 3 grain doses thrice daily for three days.

Extraordinary Hereditary Fertility.—Salenta, of Liebach, reports the case of a woman, one of quadruplets, who married a man, one of twins. She gave birth to 32 children in 11 pregnancies. Three of these resulted in twins, 6 in triplets, 2 in quadruplets. Of the children, 28 were born alive. This occurred at the beginning of the century, but seems to be authentic.—(Central. f. Gynæc., p. 312.)

The Management of Labour in Twin Pregnancies.—Professor Stephenson continues his series of articles in the Scottish Medical and Surgical Journal for March. This article is largely tabular, so that it does not lend itself readily to abstraction. Professor Stephenson shows that in twin labours the infant mortality is fully two and a half times greater than in single births. Again, the mortality is I per cent higher in the case of the second child than in the case of the first, in spite of the greater ease of its expulsion. The death-rate rises rapidly with the increase in the duration of time since the birth of the Thus, the mortality of the second half hour is four times greater than that of the first half hour. He then concludes that in the interest of the child it is desirable that the labour should be ended within the first half hour after the birth of the first child. An analysis of his tables shows some surprising results as regards mortality in relation to presentation. The deathrate in head cases is much higher than in single births, and in breech cases much less. So that we must no longer consider the existence of a head presentation in the second twin as a safe indication for leaving the case to Nature, but, on the contrary, must consider it rather an indication for early interference; and the inference from the tables further is that turning is the operation indicated. The subject is to be continued later.

The Indications and Modes of Drainage after Abdominal and Vaginal Section.—Dr. Senn, of Chicago, contributes an article under this heading to the American Gynæc. and Obstet. Journal (March, 1896). Dr. Senn always uses tubular drainage for pus; for removing serum he uses the tube lightly packed with iodoform gauze, reserving drainage by tampon for cases where hemorrhage must be arrested. For large cavities which require to be stuffed Dr. Senn considers the Mikulicz drain of iodoform gauze to be risky from the absorption of iodoform. He recommends only one layer of iodoform gauze packed with single sterilised gauze. Among the conditions calling for drainage are—disease of the gall-bladder, in the absence of a permanent occlusion of the common duct; cysts of the pancreas (the resulting fistula usually closes in a few weeks); and pelvic abscesses, in connection with which he warns the surgeon to be conservative. He lays down the rule

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in hydronephrosis, whether diagnosed before the opening of the abdomen or not, that the surgeon should make a lumbar laparotomy, and not attempt to drain from the front.

Steam in the Treatment of Septic Conditions of the Uterus.—The New York Medical Journal for June, 1896, and March, 1897, contains articles on this subject, quoting the results of cases under the care of Dr. Pincus, of Danzic. Dr. Pincus thinks this the best method of disinfecting the the uterus, especially after abortion. "Habitual abortion" may be cured by application of steam at 212° F. for two minutes. The steaming must be employed only when there is no complication affecting the adnexa, though early inflammation, without supportation, is favourably affected by the steam. The action is superficial if the steam is applied for a short time, but deeper if it is applied longer, or at a higher temperature (248° F.). The treatment is entirely painless.

On a New Method of Opening the Abdomen.—Dr. Küstner, of Breslau, advocates a new method he has used with good results in eight cases. The laity, he says, are afraid of the results of the usual median incision. Accordingly he cuts down transversely, just below the upper level of the pubic hair. His incision is made about three inches long, extending down through skin and fat to the fascia. The edges are then widely retracted, and an incision made in the ordinary way through the tinea alba. Two inches are usually sufficient to permit of removal of uterine appendages, breaking up of adhesion, and so on. The deep incision is closed with catgut and silk; the superficial incision is closed with silkworm stitches, which pass into the fascia to prevent a cavity being left. If primary union is obtained, as it should be, the pubic hair will completely hide the cicatrix.—(Central. f. Gynæc. p. 271.)

On the "Immigration" of Stitches to the Bladder after Operations.—Kolischer, of Vienna, has an article on this subject in the Wiener Klin. Rundschau (quoted in Centralblatt f. Gynæc.). Kolischer has seen this follow ovariotomies, ligations of the broad ligaments, and vagino-fixations of the uterus. He considers this condition to be sufficiently frequent to call for careful cystoscopic examination in all cases where women complain of bladder symptoms after pelvic operations. He removes the stitches with a small guillotine introduced through the cystoscope tube. The cystitis usually disappears after removal of the stitches. Two cases were lately shown in Glasgow, where calculi formed on stitches which had passed into the bladder.

Symphysiotomy versus Induction of Premature Labour.—Dr. Warden, in a painphlet published by Stenhouse, of Glasgow, has collected the results of the induction of labour in the Glasgow Maternity for a series of years. He records 39 cases where labour was induced on account of pelvic contraction, with 1 maternal death. Of the children, 13 were born dead; 6 died within twenty-four hours; 4 died within a week; 16 left the hospital alive. This gives a feetal mortality, at time of dismissal, of 59 per cent. Dr. Warden expressly disclaims the possibility of comparing the results of the Clasgow Maternity with those of the Clinique Baudelocque, where the conditions are so different. But his argument is directed towards showing that symphysiotomy would give the children a better chance, and he concludes by asking why it should not be tried. The question has at different times been discussed by the staff, and decided in the negative for reasons stated at length by the present reporter in a paper read before the Glasgow Medico-Chirurgical Society. In that paper a considerable number of cases was collected in which there had been formidable accidents during the operation, with not a few maternal deaths. As we have mentioned, Dr. Warden admits the very different conditions in the Glasgow Maternity, and we were early brought to see that in the Glasgow Maternity these general conditions were not favourable for such an operation. Pinard has claimed that it is a safe operation; his last

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results are published up to December, 1896 (Annales de Gynécologie). During the preceding twelve months there were 14 symphysiotomies, with 4 fœtal deaths, chiefly from broncho-pneumonia. Of the mothers, no less than 10 had pathological puerperia, 6 of these being treated with serum injections, and another with curetting; another had an abscess in the labium. There were 2 maternal deaths. Even in the Clinique Baudelocque, the operation cannot be said to be free of the risk of sepsis.

## Books, Pamphlets, &c., Received.

The Swedish System of Physical Education: its Medical and General Aspects, by Theodora Johnson. With Twenty-seven Illustrations. Bristol: John Wright & Co. 1897.

Obstetrical Transactions. Vol. XXXVIII for 1896. Edited by W. R. Dakin, M.D., and Percy Boulton, M.D. London. 1897.

- Transactions of the Eighteenth Annual Meeting of the American Laryngological Association, 1896. New York: D. Appleton & Co. 1897.
- A System of Medicine by Many Writers. Edited by Thomas Clifford Allbutt, M.A., M.D., LL.D., F.R.C.P., F.R.S., &c. Vol. II. London: Macmillan & Co., Limited. 1897. (25s. net.)
- The Matron's Course: an Introduction to Hospital and Private Nursing, by Miss S. E. Orme. London: The Scientific Press, Limited. 1897. (1s.)
- Formulaire des Médicaments Nouveaux, par H. Bocquillon-Limousin, avec une introduction par H. Huchard. Paris: J. B. Baillière et Fils. 1896. (3 fr.)
- Collected Contributions on Digestion and Diet, with an Appendix on the Opium Habit in India, by Sir Wm. Roberts, M.D., F.R.S. London: Smith, Elder & Co. 1897. (5s.)
- The Phonographical Record of Clinical Teaching and Medical Science. Vol. III: Nos. 1, 2, 3, and 4. London: Pitman & Sons.
- City of Sheffield: Report on the Causes and Prevention of Smoke from Manufacturing Chimneys, by Harvey Littlejohn, M.A., M.B., Medical Officer of Health. Sheffield: Wm. Townsend & Son.
- Antiseptic Principles for Nurses, by C. E. Richmond, F.R.C.S. London: J. & A. Churchill. 1897. (1s.)
- A Plea for the Unborn, by Henry Smith. London: Watts & Co. 1897.
- Lectures on the Treatment of Fibroid Tumours of the Uterus, by Franklin H. Martin, M.D. Chicago: The W. T. Keener Co. 1897. (1 dol. net.)
- A Course of Practical Histology, by Edward Albert Schäfer, LL.D., F.R.S. Second Edition. London: Smith, Elder & Co. 1897. (7s. 6d.)

## GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FIVE WEEKS ENDING 24TH APRIL, 1897.

	1				
	Wask anding				
•	March 27.	April 3.	April 10.	April 17.	April 24.
Mean temperature,	49·3°	36·7°	41 ·5°	44 ·9°	45 ·0°
Mean range of temperature between day and night, .	10·3°	′15 <b>·6</b> °	18 <b>·6°</b>	13·9°	16 <b>·6°</b>
Number of days on which rain fell,	7	2	1	7	1
Amount of rainfall, . ins.	2.59	0.13	0.03	1.18	0-20
Deaths registered,	318	331	347	307	302
Death-rates,	23.1	24·1	25.2	22.3	20-2
Zymotic death-rates,	3.7	4.3	3.5	3.8	3-2
'Pulmonary death-rates, .	8.0	8.0	8.3	6.7	7.1
DEATHS— Under 1 year, 60 years and upwards, .	75 56	69 60	74 74	70 45	66 48
DEATHS FROM-					
Small-pox,		•••			
Measles,	19	15	10	19	14
Scarlet fever,	3	1	1	1	1
Diphtheria,	1	6	2	1	1.
Whooping-cough,	22	28	26	22	23
Fever,	2	5	1	4	2
Diarrhœa,	4	4	8	6	3
Croup and laryngitis, .	2	2	1	2	5
Bronchitis, pneumonia, and pleurisy,	74	75	65	66	76
Cases reported— Small-pox,					1
Diphtheria and membranous	8	10	111	6	l _
croup,	19	10	13	15	7
Erysipelas,	71	52	47	31	21
T		-			35
The Association of the same	20	 13	14	10	1
_ · · · · ·	-				6
Continued fever,	";		";		•••
Puerperal fever,	1	1	1	1	1
Measles,*	309	311	225	304	161

<sup>\*</sup> Measles is not notifiable.

#### THE

## GLASGOW MEDICAL JOURNAL

No. VI. June, 1897.

### ORIGINAL ARTICLES.

# EYE SYMPTOMS IN DISEASES OF THE NERVOUS SYSTEM.1

By JAMES HINSHELWOOD, M.A., M.D., F.F.P.S.G.,

Assistant Surgeon to the Glasgow Eye Infirmary; Dispensary Physician to the Western Infirmary; and Assistant to the Professor of Clinical Medicine in the University of Glasgow.

It is not my intention to attempt a systematic examination of all the eye symptoms which are met with in diseases of the nervous system. This is a very extensive subject, and could not possibly be dealt with in a single paper. The present object is simply to draw attention to several points of great clinical interest and importance which have specially impressed me, after a considerable period devoted to the study of this class of symptoms, with exceptional opportunities of a wide and varied field of observation.

In this age of specialism there is an increasing tendency to regard each organ of the body as a special entity to be handed over to the exclusive care of a practitioner who devotes his whole attention to that particular organ. Now, it is far from my intention to deny the desirability and even necessity of specialism in medicine.

With the rapid growth of medical knowledge, and with the

 $^{1}$  A paper read at a meeting of the Glasgow Southern Medical Society, 15th April, 1897.

Vol. XEVIL Digitized by GOOGIC increasing complexity of instruments and apparatus requiring special technical training and skill, there must inevitably follow the increase of specialism. But in this increasing tendency there lies the danger of losing sight of the unity of medical science. An organ such as the eye cannot be regarded as an independent member of the body having a life of its own, but rather as a part of the human organism, sharing in its fluctuations of health, and often manifesting in a peculiarly vivid manner the leading characteristics and idiosyncrasies of the organism as a whole. Hence in many cases the ophthalmic specialist can neither found his diagnosis nor lay down his treatment from consideration of the eve symptoms alone, but must be largely guided by reference to the general condition of the patient and of his other organs. Similarly the physician must frequently look to the eye for the additional symptom or symptoms which will enable him to arrive at a correct diagnosis of the disease of some other organ from which the patient may be suffering. In fact, special knowledge and the general practice of medicine are so closely and intimately allied to each other that you cannot divorce the one from the other. Their close relationship and mutual interdependence are particularly seen in the intimate connection of many eye symptoms with the problems of general medical diagnosis.

There is no class of diseases in which eye symptoms are so significant and so frequent as in diseases of the nervous system, in the diagnosis of which they are often of prime importance. Their position in relationship to diagnosis may

be formulated in three propositions:—

First. The eye symptoms are frequently the earliest unequivocal manifestations of nervous disease, and hence may lead directly to the detection of grave organic disease of the

nervous system which had hitherto been unsuspected.

Second. While all the other symptoms are indefinite and obscure, the recognition and correct interpretation of the eye symptoms may enable the physician to diagnose disease of brain or spinal cord at a much earlier period than would have been possible from consideration of the other symptoms alone.

Third. The eye symptoms may supply an important additional factor which strengthens and confirms the diagnosis

already made from the other symptoms.

Without further preface I will pass to the consideration of some eye symptoms, which will enforce and illustrate these statements.

The ophthalmoscopic examination of the eye is an essential

part of the examination of the patient in all cases of suspected disease of the nervous system. As we shall see, it often affords the most valuable aid in diagnosis, and should always be as much a part of the routine examination as the investiga-

tion into the condition of the patient's reflexes.

With a little practice this ophthalmoscopic examination can be made at the bedside by the light of a candle or taper. If it is daylight the light can be excluded by means of an open umbrella. There may be some little difficulty at first with this feeble and unsteady illumination, but a little perseverance and practice will soon enable the observer to get over his initial difficulties and to make efficient examinations even under very unfavourable circumstances, as in the case of an unconscious or delirious patient.

Two of the most important ophthalmoscopic symptoms in reference to nervous diseases are optic neuritis and optic atrophy. I wish to direct attention to a few practical and

important considerations regarding these conditions.

Optic neuritis is one of the most important symptoms in intracranial disease. It is particularly valuable as an aid to the diagnosis of intracranial tumours, of which it is one of the most important accompaniments. Although there are considerable differences in the statistics as to its exact frequency, still all are agreed as to its very frequent occurrence. Gowers, in his Medical Ophthalmoscopy, states that optic neuritis is present at some period in at least four-fifths of the cases of intracranial tumour. This, I think, may be regarded as a pretty correct estimate of its frequency. The optic neuritis in such cases is nearly always double, although a very few cases of great rarity have been reported where, with unilateral optic neuritis, an intracranial tumour was afterwards found. It should always be borne in mind that the optic neuritis may appear at any time during the development of the intracranial growth. Sometimes it does not appear until late in the course of the disease, when its appearance only helps to confirm the diagnosis already made from the other symptoms, but, on the other hand, it is sometimes one of the earliest symptoms, and may first arouse suspicion of organic intracranial disease. In a case of suspected tumour, then, the observer should never rest satisfied with a single examination, but should examine the condition of the discs at frequent intervals. Another point of great importance is to remember that optic neuritis of considerable intensity may be present in both eyes without there being any lowering of the visual acuity, or, at least, without its being appreciable

to the patient. I have repeatedly found optic neuritis present in both eyes, although the patient assured me there was nothing wrong with his sight. Hence, wherever there is suspicion of cerebral disease the eyes should always be carefully examined with the ophthalmoscope, even atthough the

patient is not conscious of the slightest visual defect.

If the neuritis is very intense the swelling may occupy an area very much larger than that of the normal disc, and hence the nutrition of the surrounding retina may be greatly disturbed for a considerable distance, as evidenced frequently by the presence of hæmorrhages and white spots. When the neuritis is subsiding and the swelling becomes less, the presence of these white spots, especially if near the macular region, may puzzle the inexperienced ophthalmoscopist from their resemblance in character and position to the white spots met with in albuminuric retinitis. It is important to know that an appearance of the fundus very closely resembling that met with in albuminuric retinitis is sometimes met with in cerebral tumours.

When the patient comes under our observation the acute stage of the neuritis may be past, it may be in a position of retrogression, or have reached the stage of atrophy—a post-papillitic atrophy. But, as a rule, careful examination of the disc and its neighbourhood will lead us to suspect the existence of a previous neuritis. The disc frequently has an opaque filled-in look, and the edges of the disc are frequently irregular with considerable pigmentary disturbance in their neighbourhood. There may be fine white lines accompanying the vessels on the disc, and the arteries may be somewhat narrowed in calibre. With a pale atrophic disc such appearances would lead us to suspect that there had been an antecedent optic neuritis.

The mistake frequently made is attaching too much importance to optic neuritis per se as a sign of intracranial tumour. It must not be forgotten that optic neuritis occurs in a great variety of conditions besides intracranial tumours—e.g., in cerebral meningitis, in cerebral abscess, in syphilis, in anæmia, in lead-poisoning, and in disturbances of nutrition of very various kinds. When the other symptoms point strongly to the probability of intracranial tumour the occurrence of double optic neuritis will afford a strong confirmation of that opinion, but in the absence of very definite symptoms too much importance must not be attached to its presence. For example, headache and vomiting with double optic neuritis are met with in other conditions than intracranial tumour—in cerebral

meningitis, in Bright's disease, and in lead-poisoning. Hence in making our diagnosis we must be careful to exclude the

possibility of these conditions.

Double optic neuritis, although a valuable confirmatory symptom of intracranial tumour, tells us nothing as to the size, position, or character of the tumour. It occurs with tumours of all sizes, with tumours in all positions within the cranium, and with tumours of every kind.

In meningitis, particularly in tubercular and in syphilitic meningitis when located at the base, changes in the optic discs, hyperæmia with distension of vessels, and optic neuritis are present in such a proportion of cases as to constitute a very important symptom of these diseases. Every physician of experience knows the very insidious way in which tubercular meningitis frequently begins. Occasional headache and vomiting with constipation and slight intermittent rise of temperature may be all we have to found our diagnosis upon for a considerable time. But in children we are all familiar with such a group of symptoms, which gradually disappear on careful regulation of the bowels, simple dietary, and the administration of some simple stomachic remedies; hence the uncertainty of our diagnosis at this early stage. It is in these cases of insidious onset, where the early symptoms are indefinite, that the ophthalmoscope frequently gives very real assistance in the diagnosis, if the discs be carefully watched from day to day. The recognition of an optic neuritis would at once indicate the grave nature of the symptoms, and show that these were due to intracranial disease and not to mere stomachic derangements.

Gartick, who devoted special attention to this point, narrates that of twenty-six cases watched by him in the Children's Hospital from day to day, he found the discs normal throughout in five, distinct swelling was developed in about half the whole number, increased redness only in a quarter, and in a few others only distension of the veins. Of these twenty-six cases, the ophthalmoscope was of real diagnostic assistance to

him in six.

It is therefore an important clinical fact to bear in mind that, in these doubtful cases of insidious onset and with indefinite symptoms, the careful examination of the fundus of the eye from day to day will frequently be of the greatest assistance to the physician in enabling him to arrive at a diagnosis much earlier than he possibly could from observation of the other symptoms alone.

With regard to tubercular meningitis, my ophthalmoscopic

experience has brought me into contact with a class of cases which induces me to believe that although death is the usual termination of tubercular meningitis, yet that cases recover. Without a doubt cases recover which have suffered from severe meningitis and in which there is a very strong presumption of the tubercular character of the inflammation, although the possibility of conclusive proof is removed by the

very fact of recovery.

The cases referred to are those of children with very defective vision or usually totally blind, who on examination are found to be suffering from optic atrophy, but of such a character as to make it certain that it had followed an antecedent optic neuritis—a post-papillitic atrophy. In many of these cases on cross-examination the defective vision was found to have begun when the child was suffering from severe cerebral symptoms. There was frequently a history of headache, vomiting, feverishness, convulsions, and sometimes of squinting. In some cases the children had been comatose for days, passing urine and fæces in bed, and regarded by all as in a perfectly hopeless condition. Yet they gradually recovered and were restored to health, but with vision greatly damaged or more frequently totally lost. When such a history as this is accompanied, as it frequently is, with a family history of tubercular disease, the presumption is strong that these are cases of recovery from tubercular meningitis or tubercular tumour. I have seen so many of these cases that they have made a deep impression upon me. I will content myself with narrating the most recently seen as a typical example of the class.

A mother recently brought her boy, aged 11 years, to consult me regarding his loss of vision, almost complete, the lad being only able to discriminate between light and darkness. On ophthalmoscopic examination the optic discs were found to be porcelain-white with the vessels much narrowed, the arteries in some places being reduced to mere threads. The borders of the discs were irregular, and for some distance round them there was great disturbance of the choroidal pigment. Near the macular region there was considerable pigmentary disturbance and numerous faint, white spots, very like those met with in albuminuric retinitis, and already referred to in the remarks on optic neuritis. In short, the appearances were

those of an atrophy following optic neuritis.

The mother gave the following history:—Fifteen months previously the boy had had a severe attack of "brain fever." He had complained for some time of intermittent headache

which became so excruciating that he was confined to bed and the doctor called in to attend him. With the severe headache he had attacks of vomiting and occasional squinting. He had one severe convulsive attack, and lay comatose for several days, passing everything in bed. Throughout the illness he was very feverish. On regaining consciousness he began to complain of his eyesight. His health gradually improved, but his eyesight became steadily worse.

When I saw him, he looked a strong, healthy lad, but was totally blind from the post-neuritic atrophy. Of ten children, five were dead; one died when 9 months old of "water in the head;" a second, et. 14 months, of "decline of the bowels;" a third, of "consumption," when 16 years old. The father had

a sister who died of consumption when 19 years of age.

The presumption is certainly a very strong one that we have here a case of recovery from tubercular meningitis. I have in my notebook the record of a case very similar to the above, where, with a strong tubercular family history, the child was suffering from disease of the tarsus, which was pronounced to be tubercular.

I have seen so many cases of this class that I would give a word of warning against giving an utterly hopeless prognosis in cases of tubercular meningitis. It is true that death is the usual termination, but it is an undoubted fact that cases do recover, even cases of the most severe type, where the patient has lain comatose for days, and in an apparently hopeless condition.

Optic atrophy is another important ophthalmoscopic symptom, which is frequently of great value in the diagnosis of disease of the nervous system. I have made it a routine practice for many years to test the reflexes of all patients suffering from optic atrophy, and have been struck with the great frequency with which it is associated with symptoms of disease of the nervous system. Most important of all, the optic atrophy is frequently a very early symptom, and may first lead to the recognition of grave organic disease of brain or spinal cord. The patient may have had slight antecedent symptoms, but these may have been regarded as mere functional disorders, or were apparently so trifling that the patient had no recourse to medical advice.

This is particularly true in the case of locomotor ataxia. When the muscular inco-ordination is present with the characteristic peculiarities of gait, the diagnosis is easy. The ataxic gait is the most striking symptom, and frequently comes on comparatively early in the course of the disease. But I wish

to direct attention to a class of cases which are not so well known, and consequently the true nature of which is frequently not recognised for a very considerable period. There are many cases where there is no alteration whatever in the gait, even on the most delicate tests, and yet where the diagnosis of locomotor ataxia in the pre-ataxic stage may be made with great certainty. I have seen, chiefly at the Eye Infirmary, a very large number of these cases, and almost invariably there was no suspicion as to any affection of the nervous system. The patient complains of failing vision, and on examination is found to have atrophy of the optic discs. The knee-jerks are examined and found to be entirely absent. On examining the pupils they are found to react on accommodation, but not to light—the well-known Argyll-Robertson phenomena.

On cross-examination there is very frequently a history of shooting pains in the lower limbs, which have been regarded and treated as rheumatic. Yet the diagnosis of locomotor ataxia may be confidently given with such a group of symptoms, even in the complete absence of ataxia. It is a widely observed clinical fact that when atrophy of the optic nerve is of early occurrence in tabes, ataxia is generally very slow in development, and when it does occur is usually only very slight. In some cases no ataxia appears. Buzzard narrates a case in which atrophy existed for fifteen years, associated only with lightning pains and loss of the knee-jerks. Gowers narrates a case where the atrophy of the disc was complete and vision lost for twenty years before the first symptoms of ataxia showed themselves.

Last year I showed a patient at the Glasgow Medico-Chirurgical Society with eye symptoms of eight years' duration, and other symptoms of tabes dorsalis, but without the slightest ataxia. The eye symptoms observed were optic atrophy, peripheral contraction of the visual fields, contraction of the pupils (spinal myosis), and Argyll-Robertson pupilary phenomena.

The other symptoms were complete absence of the knee-jerks, lightning pains in the lower limbs, occasional numbness of the legs, and slight interference with the sphincters of bladder and bowel. Here was a perfect example of the early occurrence of a group of eye symptoms which rendered the diagnosis of tabes dorsalis perfectly certain at a period when it would have been impossible to arrive at a positive opinion from consideration of the other symptoms alone.

The early diagnosis is of great importance in such cases, as it affords the only possible chance of checking the progress

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of the disease by treatment. This is particularly true of those

cases which have a previous history of syphilis.

In the early stage of disseminated sclerosis, when the symptoms are comparatively trifling and perhaps not causing the patient any great alarm or inconvenience, the occurrence of optic atrophy may first call the attention of the physician to the fact that the patient has been attacked with a grave form of degeneration of the central nervous system. Buzzard, a few years ago, called special attention to the frequency of optic atrophy in disseminated sclerosis. He found optic atrophy specially valuable in the diagnosis of these atypical forms of disseminated sclerosis where the characteristic symptoms are but slightly marked. My experience is entirely in harmony with this. It is a familiar experience with me to see cases of optic atrophy associated with exaggerated reflexes, ankle-clonus or a tendency to it, and slight paresis of the lower extremities. In some of these cases the increasing weakness of the limbs was the only symptom observed by the patients previous to the development of the eye symptoms, but this had troubled them so little that they had not had recourse to any medical advice. When the typical symptoms are well developed —the tremors, the sensory disturbances, and the spastic gait the diagnosis is easy, but at the outset, when the symptoms are less definite and pronounced, the occurrence of optic atrophy may aid us in recognising the true nature of the disease.

In disseminated sclerosis, too, the patient may have visual defects out of all proportion to the ophthalmoscopic symptoms observed, or, if seen at the outset, without any ophthalmoscopic changes at all. These visual troubles may take the form of considerable diminution of visual acuity in one or both eyes, frequently with an irregular contraction in the field of vision, sometimes with a central scotoma which in some cases exists for colours only. If seen in the early stage, nothing abnormal may be found in the fundus even on the most careful examination. This condition depends upon the development of islets of sclerosis in one or both optic nerves, similar to those found in brain and spinal cord. After a time a secondary atrophy may develop and be observed with the ophthalmoscope. It is, however, important to bear in mind that in all puzzling cases of visual defects for which no evident reason can be seen on ophthalmoscopic examination the patient's reflexes and condition of the nervous system should be carefully examined. If such a visual disorder is found associated with exaggerated knee-jerks, weakness of lower limbs, tremors, or sensory Digitized by 600819

disturbances, then the nature of the visual defect is clear and may lead to the diagnosis of the grave degenerative disease of the nervous system from which the patient is suffering.

Ocular palsies are frequently of the greatest importance in the diagnosis of diseases of the brain and spinal cord. This is a very large and complex subject, and I intend to mention only one aspect of it. The larger my experience becomes, the more I am impressed with the fact that in every case of ocular palsy the condition of the nervous system as a whole ought to be most carefully examined, as the ocular palsy will frequently be found to be the first striking symptom of some general disease of the nervous system which, from its insidious and gradual onset, has not yet obtruded itself on the patient's notice, but of which unequivocal evidence may be found on careful examination. I will content myself with illustrating this general remark by reference to the transient ocular palsies which are frequently met with in the early and pre-ataxic stages of locomotor ataxia. There is another form of ocular paralysis, permanent in duration, partial or complete, which, however, is more commonly met with in the later or ataxic stages of the diseases, when the diagnosis has been made evident from the presence of prominent symptoms. transient ocular palsies, however, are most frequently seen in the very early stages of the disease, and not unfrequently lead to its detection. These transient palsies may attack any ocular muscle, but most frequently the external rectus. These attacks of palsy last generally only for a very short period, a few hours, days, or weeks, disappearing spontaneously. The symptom observable by the patient is diplopia. Hence it should be an invariable rule in all cases of transient diplopia, particularly if this is recurrent, to strongly supect the probability of the early stage of locomotor ataxia. No ataxia may be present at this stage. But examine carefully the condition of the knee-jerks and the pupilary reactions to light and accommodation. It will not unfrequently be found that these transient attacks of diplopia are associated with loss of knee-jerks and Argyll-Robertson pupilary phenomena, with probably a history of so-called rheumatic pains in body and limbs. The diagnosis is then clear, and the eye symptoms have directly led to it.

The examination of the visual field is often of the greatest service in medical diagnosis. An excellent example of the direct bearing of defects in the visual field on the problems of medical diagnosis is seen in the case of lateral homonymous hemianopsia. By a lateral homonymous hemianopsia is meant the loss of similar halves of each field of vision—i.e., the loss of either both right halves or both left halves. When such a defect is present, it means the existence of a lesion in some part of the optic tract above the chiasma, or in the visual centre itself in the occipital lobe. Loss of the left halves of the visual fields, i.e., left homonymous hemianopsia, corresponds to a lesion on the right side of the brain, and loss of the right halves, i.e., right homonymous hemianopsia, to a lesion on the left side. The recognition of such a hemianopsia is absolute proof of an intracranial lesion, and is thus of great diagnostic importance.

I could quote many examples of the importance of the recognition of this visual defect, but will content myself with one of the recent cases which has come under my notice.

The patient, a lady, æt. 56 years, was sent to me about fifteen months ago by her medical attendant to see if glasses would not improve the defective vision of which she had been complaining for several weeks. The patient complained greatly of running against people on the street, and tumbling over chairs in her own house. On examination it was found that the left halves of both visual fields were lost—i.e., the patient had left homonymous hemianopsia. She had suffered greatly for some time from insomnia and headaches. to her medical attendant and pointed out that the left homonymous hemianopsia indicated the existence of a cerebral lesion on the right side of the brain, interrupting the right optic tract or involving the visual centre in the occipital lobe, and that the insomnia and headaches were no doubt also referable to this cause. I never saw the patient again, but a few weeks thereafter I heard from her medical attendant that paralysis of the left arm and left leg had set in, pointing to a further extension of the lesion on the right side of the brain, to which I had previously called attention. The patient gradually sank, became comatose, and died. Here, then, the recognition of the true character of the visual defect led directly to the diagnosis of a cerebral lesion previously unsuspected, and enabled us to say that the insomnia and the headache were not due to trifling functional disorder, but were the accompaniments of grave organic cerebral disease. The rapid development of further cerebral symptoms and fatal issue proved the correctness of the diagnosis.

In these somewhat fragmentary remarks, reference has been made only to a few of the eye symptoms which are met with in diseases of the nervous system, To attempt any systematic

or exhaustive treatment of such an extensive subject is far beyond the scope of a single paper. My object has simply been to select points sufficiently numerous and important to emphasise and illustrate the three propositions which were formulated at the outset as to the relation and importance of eye symptoms in the diagnosis of diseases of the nervous system.

It is clear that the physician who learns to recognise and appreciatiate the diagnostic value of these symptoms will have added another weapon of great value to his armamentarium, which will enable him to grapple more successfully with many of the difficult problems of disease, by adding considerably to

his powers of early and precise diagnosis.

# SHOULDER PRESENTATIONS IN MIDWIFERY PRACTICE<sup>1</sup>

BY ROBERT POLLOK, M.B., C.M.

When ruminating on a subject with which to fulfil my promise to our energetic and worthy secretary, Dr. Watson, a case of transverse presentation occurred in my practice, and this reverted my mind to a subject in midwifery in which, fortunately or unfortunately, I have had some little experience, having had to deal with such malpresentations fifteen times, twelve cases occurring in my own practice, two with medical friends, and one in the practice of a midwife.

This frequency is somewhat below the usual average, Winckel giving his experience at Dresden, 0.42 per cent; at Munich, 1.5 per cent; whilst Schroeder's analysis of one-third of a million of obstetric cases collected from all sources yields 0.56 per cent, and Churchill states that such presentations are

met with in about 1 in 2313 cases.

I am eliminating from my own experience premature labour, an encephalous or other monsters in which there is a large quantity of liquor amnii, and which usually present in a transverse manner.

The case which suggested the subject of this paper occurred about a fortnight ago. Mrs. R., aged 32 years, was in her fourth confinement, and took ill about midnight. Dr. James

<sup>&</sup>lt;sup>1</sup> Read at a meeting of the Glasgow Southern Medical Society, 18th March, 1897.

Maclean saw her in the early morning, and waited for some time. The pains were slight, and the os was not dilated to any extent. From abdominal, as well as vaginal examination, he concluded he had to deal with a transverse case. the lady about 12:45 midday, and corroborated his diagnosis. In conformity with my usual practice I proceeded at once to effect delivery. The membranes were intact, the os was now nearly fully dilated, and so my mind was quite easy about the management of the labour, which was concluded in about fifteen minutes. When the patient was fully under chloroform I quite easily completed the dilatation of the os, and gently insinuated my left hand in the form of a cone along the inside of the uterus, following the hollow of the sacrum on to the fundus of the uterus, where, having felt for a foot, I ruptured the membranes, and, with my right hand externally on the abdomen, raised the head which was lying in the left groin. and completed podalic version, never losing hold of the foot until I had brought it through the vagina. The hip of the other limb followed, and the trunk descended. I then brought down the arms in the usual way. The head was large, and as the pelvis of the woman is not a roomy one, there was considerable difficulty in getting the head delivered. By flexing the body of the child well towards the abdomen of the mother, depressing the chin, and hooking the finger in the mouth, delivery was accomplished. The child was pretty much cyanosed, but by the practice of Schultze's method of restoration, along with alternate douching with hot and cold water. it soon recovered, and both mother and child did well.

The whole process of delivery was accomplished with as much ease and as rapidly as an ordinary forceps case, which

happens as an everyday occurrence in all our practices.

This same patient has always given some anxiety in her accouchements. When a primipara she was seized with antepartum eclampsia. Dr. Robert Forrest at that time kindly gave chloroform whilst I rapidly dilated the os, and delivered with forceps a living male child. It is noteworthy in midwifery how unnatural conditions with no apparent relationship are apt to arise in the same woman.

Contrast this with another case I saw where the woman had been in labour two days. At the time I visited, the patient was in a weak and collapsed condition. The hand was presenting, so there was no difficulty in diagnosis. I turned with considerable trouble, pushing up the hand and shoulder, and tilting them on to the left side, and then I managed to get my left hand, as in the previous operation, along the hollow of

the sacrum, and brought down the foot. It was a somewhat tedious business, as it always will be when the liquor amnii is drained away and the uterus firmly contracted on the fœtus. However, version was accomplished safely enough, but the shock to the mother, coupled with the exhaustion due to two days' hard but ineffectual labour, as well as the laceration which had occurred from repeated examinations, proved too much for the patient, and she succumbed some days afterwards. Of course, the child was dead long ere I saw the case.

Allow me to relate another instance of shoulder presentation which I saw with two medical men shortly after delivery had been effected. When the physician in attendance first saw the patient, he had not been able to make out any presentation, and as the os was not fully dilated he elected to wait. being summoned some time afterwards he found the waters ruptured, and diagnosed a hand. He at once sent for a friend, and they performed podalic version. Shortly afterwards, mischief appeared in the shape of collapse. I then saw the woman, and in course of conversation or consultation with them, judging from the history and the condition of the patient, who appeared suffering from shock, I ventured the opinion that rupture of the uterus had taken place. At the postmortem, which was granted, and which we were all anxious to have, a very large rent was found. The specimen I have still in my possession.

These two cases happily complete my experience of the dark side of shoulder or transverse presentations, and I can turn with satisfaction to the other thirteen, which were delivered

with safety to the mother and child.

I attribute this success wholly to the early recognition of the malpresentation, and to the one and never-varying line of my procedure in such cases. If we stand shivering and in a dubious attitude, or if we are too inquisitive about knowing accurately whether it is a right shoulder or a left, a dorsoanterior or dorso-posterior, or amuse ourselves with attempting cephalic version or play at the bipolar method of turning, and thereby run the risk of allowing the membranes to rupture and therewith our great safeguard to ebb away, the case will assuredly come to grief. It is very interesting to know whether "spontaneous evolution" may occur or not. According to Denman it may, but even in the instances recorded by that observer the children were born dead. It would be to me amusing to read the diagnosis of shoulder presentations given in most text-books if I were not conscious of the gravity of Such diagnosis is given as—on abdominal the situation.

examination the head is found in one flank and the breech in the other; on vaginal examination the finger may detect the clavicle and the spinous process of the scapula, or the ribs may be detected, and if still in doubt it may be even advisable to

pull down the hand and arm.

I am fully convinced that with the exception of the first of these directions—viz., the abdominal examination, which is wellnigh impracticable, for the very cases in which this presentation occurs are those in which the abdomen is pendulous and flabby, so that you cannot accurately map out head and breech through it—I say, with the exception of this examination, every other is attended with the greatest danger. Whenever, on vaginal examination, we find that we cannot make out any presenting part, or we find an elongated "bag of waters" projecting through the os, arising from the absence of descent of the feetus, we may be certain that we have one of two things to deal with—either a very narrow conjugate

diameter, or a shoulder or transverse presentation.

In such conditions I consider it wise to act for either emergency. With the arms stripped up to the elbow, thoroughly washed, disinfected, and anointed with glycerine and carbolic acid in the proportion of 1 to 40, I gently insinuate my left hand into the vagina, cautiously dilate the os, and, following the hollow of the sacrum, I soon satisfy myself in the most emphatic manner as to what I have to deal with. If it be a deformed pelvis, I judge of the size, and proceed according to the well known laws which apply to such contractions. management of such deformities is, however, outwith the province of this paper. If I meet with no undue projection of the sacral promontory, I can easily, and without fear, rupture the membranes and diagnose in the most certain way the true nature of the case. The arm is plugging the os, and will act as an efficient barrier to the escape of the liquor amnii. If the case be a transverse one, I seize the knee or foot, and gently bring it down, at the same time lifting the head up with my right hand on the abdomen. In withdrawing my arm the rush of water assists the version, and in less time than I am taking to narrate the operation, version is accomplished, and delivery is then concluded as an ordinary footling or breech.

Such has been my method, and with successful results in every case both to parent and offspring. Of course, if when you see the case, the os is not much dilated, it is always advisable to administer an anæsthetic, but in earlier years, when I had not always an opportunity of seeing the case early, and where I dreaded rupture of the membranes from

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severe expulsatory pains, I have frequently accomplished version in the manner described without the mother even being conscious there was anything amiss. When the membranes are unruptured, and you have a pelvis measuring not less than 3 inches in the conjugate diameter, the gravid uterus is as clay in the potter's hands, and you can accomplish all things. The most awkward presentation may be turned into a comparatively easy one, and the gravest condition may be successfully grappled with, whether it is a case of eclampsia, placenta prævia, or accidental hæmorrhage.

The only objection that might be urged against rapid delivery in untoward cases might be the supposed danger of introducing the whole hand into the uterus. I am firmly of opinion that, when the membranes are intact, and if due care be taken to cautiously dilate the os, with the hand and arm thoroughly aseptic, there is no risk. The average circumference of the hand in the form of a cone measures about 8 or 9 inches, in my own case 71 inches, that of the smallest feetal head is not less than 11 inches, so that you have not to dilate the os to any unnatural extent. In truth, in dilating the os cautiously with the hand, you neutralise the danger which in some cases does occur-viz., the contraction of the os round the neck of the child in head-last cases. This last fact is also, in my opinion, one of the objections to the bipolar method of turning advocated by Braxton Hicks, besides the danger of rupturing the membranes.

In my experience, the dilatation of the os of the gravid uterus at the commencement of labour with one finger, then with two and three, until you get the whole hand through, is by far the safest method to adopt. You feel what you are doing, and you can modify to any degree the amount of pressure. The method is cleanly and far more serviceable than Barnes' bag, which I have long ago discarded. I consider, for dilatation and version, and many other obstetric operations, there is only one instrument safe, reliable, cleanly, and always present, and that is the "obstetric hand."

If we reach a case long neglected, the membranes ruptured, the arm and shoulder wedged firmly down in the pelvis, rather than run the risk of laceration with subsequent metritis and its attendant puerperal septicæmia, or uterine rupture by attempting to turn, I think, with the rapid and satisfactory advance of abdominal surgery, we will obtain far better results from Cæsarean section.

Gentlemen, I am not a strong advocate for specialism in every department of medicine, but if there be one branch of

the profession more than another in which general practitioners should be specially equipped, it is in that of midwifery; for in obstetric practice it is only by recognising difficulties at an early stage and as speedily rectifying them that fatalities are avoided. In the practice of midwifery one may be called to a case in the middle of the night, when special help is not always at hand, and alone have to grapple with the gravest danger that can happen to any medical man. In proportion as we are prepared to deal with these difficulties so will our happiness and success be; for nothing damps enthusiasm or saddens professional life like an unfortunate or fatal accouchement. especially in private work.

For such reasons I think we should look on with the greatest suspicion, and oppose in the most strenuous manner, the granting of diplomas by certain institutions to ignorant women who, after a few weeks' experience, are let loose on the public as "midwives," to superintend a branch of the medical art which requires special and experienced skill, as well as readiness of resource in unexpected developments, and which is attended with such important issues to the whole community.

## ON GENERAL PARALYSIS OF THE INSANE, WITH NOTES OF AN UNUSUAL CASE<sup>1</sup>

By R. D. MOTCHKIS, M.A., M.B., Senior Assistant Medical Officer, Royal Asylum, Gartnavel.

THE subject that I intend bringing before you to-night needs no apology, for not only is it wrapped in much obscurity, but the disease called general paralysis of the insane is one which every practitioner meets with sometime or other, and which it is often of the utmost practical importance to diagnose in its earliest stage. This question of diagnosis will be emphasised by the fact that it was mistaken in the case the account of which forms the basis for this paper. It was strongly suspected on the admission of the patient; but his improvement was so rapid and great that this diagnosis was thought to be mistaken, and it was only at the post-morten examination that it was found after all to have been correct. A mistake like this, however, had no direct bearing on the treatment.

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<sup>1</sup> Read at the Glasgow Medico-Chirurgical Society, 19th February, 1897.

and it is liable to occur more easily in mental diseases than in other forms on account of the purely symptomatic classification of insanity. Such a classification is necessarily very imperfect, and its imperfections are more apparent when one disease, named entirely from its symptoms and with no definite pathology, is contrasted with another, as general paralysis, which has as its basis definite pathological changes, and which is named from the bodily symptoms in conjunction with the mental ones, and also because of its progressive and almost certainly fatal character.

J. C. was admitted into the Glasgow Royal Asylum on 18th September, 1895, as a private patient.

Past History.—He has always been regarded as a simple youth, not only by his relatives, but also by his acquaintances.

Family History.—No hereditary predisposition.

History of Present Illness.—After his father's death, four years ago, he was left to carry on the business at the early age of 21, and had it not been that his sister, a capable and energetic woman, looked after both him and it, he would have come to grief long before he actually did. As it was, the strain told upon him, and for the past year he was noticed to be peculiar and eccentric both in his general conduct and in his way of transacting business. About four or five weeks ago this eccentricity became more marked, and his manner changed; he became restless and unsettled, and imagined that he was possessed of great wealth. Acting on this delusion, he entered into negotiations with tradesmen for the purchase of quite unnecessary and often absurd articles, such as ponies, carriages made of electro-plate, large quantities of clothing, Being obviously insane and fast ruining his business, he was sent to Gartnavel.

Present Condition.—He is a tall, well-made young man, looking his age, which is 25, but not over it. Physical examination shows no abnormality of his abdominal and thoracic organs; but the reaction of his pupils both to light and accommodation is deficient, and his speech is lisping. This latter is probably due to the want of his artificial teeth through the plate being broken. Both superficial and deep reflexes are present, but not exaggerated, and there is no paresis of any of the voluntary muscles. His palate is normal.

Mentally he is in a state of simple exaltation, characterised by great foolishness both of manner and speech, and he has rather a fatuous expression, which does not mirror forth

clearly his various mental states and emotions. expansive ideas and delusions of wealth; but they are not fixed, and if reasoned with firmly he can be persuaded to disclaim them, thereby showing great facility. realises that he is in an asylum, and instead of being annoved. he confesses that he is glad to have been brought here, as for some time he has had a feeling in his head that there was something wrong. The case on admission was suspected to be one of general paralysis, but this view was soon afterwards given up on account of his rapid improvement.

Progress.—Within a few days he settled down; he became calmer, talked less about himself and his affairs, and gradually gave up the idea of great wealth; but his feelings of wellbeing and satisfaction with himself remained. At the same time he was constantly making foolish remarks, which, along with oddities in his general behaviour, showed that the improvement was more apparent than real, and due to the routine and discipline of an institution life. His bodily health rapidly improved, and he both slept and took his food well.

In November—that is, about a month and a half after admission—it is noted that he has been steadily improving, and is now fairly well, having gained nearly two stones in weight. As his condition did not apparently change for the next ten months, it will at once be shortly described. Physically he is in excellent condition and takes plenty of exercise. chiefly walking. He takes little to do with the outdoor games, as cricket and golf, chiefly because he has never gone in for such, and is useless at them. Mentally he is distinctly weak-minded; his questions and remarks are often silly, and he is unable to follow out for long a definite train of thought. As regards his conduct, he is foolish, touchy, and vain of his appearance, as shown by his fondness for frequently changing his clothes; but he is quite able to take care of himself inside an asylum, and goes about the grounds as he pleases. One of the lady patients pithily and accurately described him as "a soft sumph."

Such, then, was his condition for the next ten months, and the diagnosis was mild dementia in a youth who, though never very bright, was not sufficiently enfeebled to be called an imbecile. During that time there was no reason either to change or reconsider this diagnosis, as there was no appreciable

change in his condition.

In September, 1896, after seeing in the newspapers an advertisement about the sale of his business, he broke down entirely. The first symptoms were restlessness, sleeplessness,

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and slight incoherence of speech. This in a few days passed into acute mania; he became excited, not violent but very resistive, incoherent, and with numerous delusions about diseases he was suffering from, as syphilis. It was now discovered that he had a scar on his penis, but there was no other evidence of syphilis. Potassium iodide was given without any beneficial effect. He became destructive in both clothes and furniture, degraded in habits, and gave trouble by refusing his food. This condition lasted till his death on 15th November, and the only change was that the excitement became less active and violent; but the resistiveness mentioned above became more marked, so as to be a great hindrance to proper treatment and observation. He resisted with all his strength any examination, and was only with difficulty got to take sufficient nourishment. The case was now looked upon as one of acute excitement arising in the course of prolonged mental enfeeblement, and the prognosis was considered unfavourable. This was enhanced by the development about the middle of October of a hæmatoma of the left ear, which was blistered and soon almost completely disappeared. About this time a large abscess developed on the back of the left fore-arm. It was opened, and slowly healed in spite of constant movement and his endeavours to tear off the dressings. His condition gradually got worse, and for about a week before death his temperature varied from 99° to 100°, there being no apparent cause for it except the mental excitement, as the abscess had almost healed. There were no congestive attacks, and no signs of paralysis. The emaciation was not so extreme as is usual in fatal cases from exhaustion in acute mania, but the mode of death was the same. His pulse became weak and irregular, his breathing hurried but not laboured, and the onset of death was very gradual. He recognised his sisters twelve hours before death, which took place on 15th November.

Post-mortem (thirty hours after death).—The brain and its encasings showed most of the signs found in general paralysis. The calvarium is denser and harder than usual, and on the inner table of the parietal bones there is a distinct deposit of new bone.

The dura mater is slightly adherent to the skull-cap, and is thickened; its colour, as it lies in situ, is darker in its anterior half than usual. On removal, about 2 oz. of serum escaped, and there is now seen a false membrane—the so-called pachymeningitis hæmorrhagica interna of the Germans—which covers the frontal and part of the parietal lobes on the left

side, going down as far as the base of the brain, and on the right side the frontal lobe alone. Its thickest part is about one-eighth of an inch, and it tapers off towards its margins. Over the anterior part of the frontal lobe it is dark in colour, and has more the consistence of jelly, whereas the other parts It shows the effects of recent hæmorrhage, as are fibrinous. part of it is blood-clot, and at the base of the brain on the left side there is distinct staining of the inner surface of the dura. This false membrane is easily removed, and underneath it is seen the pia-arachnoid, which is thickened and mottled, and has at the vertex some dull opaque fluid beneath it. vessels of the pia are much thickened and tough, and the pia itself is distinctly adherent to the convolutions below, both in the frontal and parietal regions, and when it is removed some portions of the ridges of the convolutions are torn away.

The convolutions show some atrophy, and the layers of the

grey matter are well-marked.

The ventricles are slightly enlarged, and contain an excess of fluid.

The lining membrane of the lateral ventricles is thickened, but not granular, whereas in the fourth ventricle at the posterior part of its floor it is distinctly granular, and has the appearance of frosted glass.

The cerebellum seems normal.

The large vessels and the venous sinuses also show no morbid change.

There was nothing bearing upon the case in the other organs

of the body.

Microscopic sections of the motor region of the brain were prepared by my colleague, Dr. Parker. The first two, by Bevan Lewis' fresh method, show degeneration of the nerve cells, and also a few of the so-called spider cells; the latter, however, do not come out well. One section shows well-marked aneurysmal dilatation of the arterioles. This is interesting because the earliest changes are in the vascular tissues. The arterioles of the brain and its membranes become distended and engorged, and great development takes place in their sheaths, and is accompanied by an escape of leucocytes and collections of hæmatoidin crystals. The result of this is that the muscular coat of the arterioles becomes paralysed, and therefore relaxed, which favours stasis of the blood current, aneurysmal dilatations, and rupture.

Remarks.—The most striking thing about this case is the clinical history, which might be divided into three stages

the first consisting of a state of mental exaltation, in which the patient acts and speaks extravagantly; the second being a long period of comparative well-being, insanity being shown only by facility and slight enfeeblement of mind; and the third a stage of acute resistive excitement which ended fatally. A typical case of general paralysis of the insane has also three stages—the first consisting of mental exaltation, a sense of well-being and happiness, combined with exalted delusions, and sometimes acute maniacal attacks. There are also motor signs, as fibrillary trembling of tongue, and slight incoordination of muscles of hands and legs. The second stage is characterised by great facility, with spurts of excitement, and great increase of motor signs. The third stage is literally

paralysis, which has become general.

A comparison of these two histories shows that they correspond only in the first stage—that of mental exaltation with extravagant conduct. They deviate considerably in the second stage, the common element being facility, but their divergence in the third stage is so great that comparison is useless, nor indeed would it be fair to do so, because the pathological changes point more to the patient having died in the second stage than in the third. It is plain, therefore, that a case of general paralysis, like the one related, presents widely different symptoms from what is usually recognised as a typical case; in fact, so different that one not conversant with the disease could hardly believe that they had anything in common. There are, however, several varieties of general paralysis based on either special motor or sensory signs, as, for example, the peripheral form in which the disease begins either in a nerve or in the spinal cord and spreads up to the brain. Another variety, which is not common, consists in an attack of acute excitement, which passes off, and the patient is considered as recovered. He will, after a varying length of time, have another attack, which, when it passes away, will leave definite motor signs of general paralysis. A third acute attack has been known to take place before the distinctive motor signs supervened. The diagnosis in these cases is often overlooked, being, in fact, impossible in some to make; and I think it more than probable that had not J. C. died during the acute maniacal attack, he would have shown distinct and conclusive motor signs on the subsidence of the excitement.

There is another form in which the patient does not present symptoms calling imperatively for asylum treatment, and these consist of rapid degeneration of both mind and body, the essential treatment of which is good nursing. These cases come oftener under the care of those engaged in private and hospital practice, and it was partly with the intention of ascertaining the experience of such that I decided in bringing this subject before a Society like the present. This form is not always recognised as such, especially in private practice, and it may be mistaken for alcoholism, syphilitic or paralytic insanity, and even for early senile decay. Into the differential diagnosis there is no time to enter, but I hope that those present who have come across such cases will give us the benefit of their experience.

These remarks are necessarily few, and leave untouched, although they suggest, many interesting problems, for example—the nature of the disease: whether it be an entire disease—a pathological entity—or whether it be made up of several different and distinct diseases. This question has been much disputed, and competent authorities hold opposite views. Then, again, there is the relation of the mental symptoms to the parts of the brain implicated, a problem underlying the whole pathology of mental diseases, and its solution being as yet in its infancy.

## CLINICAL ESSAYS ON INSANITY.

By JOHN T. MACLACHLAN, M.D., Dumbarton, Late Senior Assistant, Hartwood Asylum, Lanarkshire.

#### IV.

#### GENERAL PARALYSIS OF THE INSANE.

GENERAL paralysis of the insane is an intractable disease characterised generally by a steady—sometimes intermittent or remittent—deterioration of the whole nervous system, and eventually revealing itself in paralytic phenomena, death commonly succeeding the outbreak of bedsores and bladder troubles. The etiology is obscure. The malady is associated with riotous modes of living, excess of the animal passions, drinking, and debauchery. Syphilis is a good deal mixed up with it, but not always. The mind of the patient is generally exalted during the earlier stages of the disease, but rapidly deteriorates, and all expression of mental life may have vanished sometime before the patient dies. The post-mortem lesions commonly found are thickening of the cranium and membranes of the brain; adhesion of the latter to some parts of

the cranium and the brain. The convolutions of the brain are generally greatly atrophied, and commonly flatter than normal: the sulci are wide, the brain substance is very soft, and the lateral ventricles frequently greatly dilated. The cord and membranes may be affected in a somewhat similar fashion. and, as a rule, there is a great increase of cerebro-spinal fluid. The whole morbid appearance suggests a chronic cirrhosis, with atrophy and softening of the nervous system. atheromatous state of the arteries is always associated with this disease as far as my experience goes. A slightly cirrhotic condition of the kidneys is of frequent occurrence, yet there may be no albumen discoverable in the urine, at times, as far as the tests—picric acid, heat with delicate acidulation, and HNO, in the cold—are concerned. The valves of the heart are found frequently thickened and atheromatous, and the left ventricle enlarged. Paraplegia is of frequent occurrence; and generally in the last stage of the disease the legs get drawn up, and the knees may lie on the chest, and the muscles of the arms—and especially of the legs—may stand out like stiff cords and resist attempts at changing the position of the legs, Bedsores develop generally over the sacrum and trochanters, but they do not discharge much pus—a sort of local dry gangrene, with a black slough in the centre.

An extreme motor restlessness is one of the most common symptoms of this disease. The patients are very troublesome to nurse, on account of their restless, aimless, and purposeless excursions about the room, and also with their hands when sitting on their chairs. They are, as a rule, destructive and filthy to a degree in their habits; tearing their clothes, undoing their trousers, and hoarding and swallowing rubbish. They seem to have an exuberant sense of well-being, like a person drunk on wine. They are absolutely indifferent to the feelings of others, and have no moral sense left. It cannot be said. however, that they are introspective. This is not a common symptom of this malady. There is a strong tendency to building castles in the air, and nurturing visions of grandeur, and splendour, and high birth, but this is not always the case. Yet, the general paralytic is not serious in his views. He does not resent his visions being torn to pieces, but seems to enjoy the merriment of his neighbours at his own expense. He is not abashed or humiliated in the least. Not only is the typical general paralytic restless in his muscles, but there is a great exuberance of noisy speech and clatter, and a strong tendency to harp on the one key. Thus, one general paralytic kept for weeks and months, in parrot-like style, shouting out in semi-

musical cadence, "one, two, three," varied with occasional interludes of "cushie-la." Grandiose delusions regarding wealth are perhaps the most common. A whining, complaining mood is occasionally seen in some general paralytics in whom the disease is progressing slowly, and in whom a certain childishness of manner is the most striking feature of their

general mental habit.

General paralytics, as a rule, take their food well, but they are not capable of concentrating their energies on any useful work. As a rule, they gradually lose weight, especially if maniacal symptoms be prominent. The pupils are frequently unequal, and sometimes irregular in their outline, and do not respond well to to the stimuli of light. The fine lines of expression around the mouth are wont to become blurred or obscured, and the tongue when protruded frequently exhibits little tremulous movements, sometimes a quivering wave passing transversely over it. As a consequence of these mild paralytic phenomena, the speech is not so clear and the enunciation not so distinct as in health. There is a noticeable faltering in speaking—a distinct slurring of labial sounds. Although the lines of expression around the mouth may be, and are generally obscured, yet the other facial lines may be well marked, and the rest of the features be quite clean cut.

The handwriting is commonly affected. It is unsteady, lacks firmness in the lines, is disorderly looking, and the ends of the words are clipped off. The emotional side of the general paralytic may be exaggerated, especially in women. There is a noticeable disposition on their part to indulge in fits of crying and a proneness to shed tears at unexpected moments. In one female general paralytic, who undoubtedly had syphilis, the hair fell out and became quite downy, like the young of birds shortly after birth. But the hair grew again in this case, perhaps on account of the mercurial treatment that was used.

Before death, there is generally extreme emaciation, but not always, and swallowing becomes gradually more and more difficult, until, at length, sloppy food only can be administered. For weeks, and sometimes months before death, all expression of mental life may have died away. Even the power of articulate speech may have gone, and the only thing the patient may be able to say, and that only as a kind of wail, is "Oh! yes!" and even then only when the patient is severely pinched and pained. A motor restlessness remains generally to near the end of life, and the patient may get incessantly

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out of bed, making and unmaking the bed. In my experience the urine as regards colour, the absence of albumen and sugar, may be normal, although the specific gravity may be low.

I have said the patients are heedless of others, and in this connection we may notice the family feelings of affection and the maternal instincts are greatly impaired, and often lost altogether, but not always. Indeed, this is a disease of protean character, and there are few, if any, constant phenomena. The disease is often said to have a twofold aspect of origin—a spinal and a cerebral. Thus, the mental symptoms may herald the disease, or tabetic ones may form the prelude. It is probable that the disease known as general paralysis may be in future resolved into several groups, but it seems to me that those cases with well-marked mental symptoms must always remain as a distinct group to justify the term general paralysis of the insane. It is easy to quibble over words, and say the paralysis is special, not general. But the word general is a convenient term to indicate the wide-spread character of the disease. We may have a cirrhosis of the whole nervous system, just as we have cirrhosis of the whole of an organ, such as the liver. Undoubtedly, the perplexing forms of general paralysis arise from the pathological lesions, not always starting in the same site, and not always progressing in the same manner, but the final goal is a complete involvement of the whole cerebrospinal axis. In the later stages of the disease, the eye symptoms may become marked, the result of great impairment of vision, and paralysis of various muscles of the eyeball revealing itself in non-consensual action of the eyes, both as regards the pupils and the eveballs themselves.

When bedsores form, they are generally succeeded by others, but they may heal quite well under local treatment. Before death, the bladder loses its power, and the urine dribbles away. Gastric troubles are not conspicuous in this disease; indeed, it would seem the other way. Respiration may become affected during the last stage of the disease from ædema of the Cheyne-Stokes breathing may or may not precede Short, repeated, and incomplete convulsive seizures often occur in the later stages, and they are supposed to be due to "congestive" attacks, but they generally pass away. A few days before death the extremities, particularly the hands, get blue, and red, and congested-looking, and sometimes the skin peels away from local death. This phenomenon oocurs in many cases of insane patients dying, and is perhaps of trophic origin. Occasionally, large solitary bullæ form, especially about the shoulder, containing clear serum, and drying up

in a few days. This is not uncommon in other forms of

insanity, and is probably of trophic origin.

The disease is typically represented by a course of two to three years' duration, but undoubtedly there are cases of a very chronic type that may last five to seven years and even

longer.

There are two types of complexion we may recognise in this disease—(1) There is the sallow parchment-looking individual, or pale pasty complexion, and I have thought that syphilis is a good deal mixed up in most of these cases; (2) a type with a rosy flush on the cheek, greasy state of the skin of the nose and forehead, and sometimes with glittering eyes. But any attempt to define the physiognomy of the disease must be extremely arbitrary. General paralytics often become—and that quite suddenly—dull and stupid, and very incoherent, or apathetic and listless, and they may "brighten" up again in a few hours. The writer has noticed that a good many general paralytics complain, when closely interrogated, of a pain over the vertex of the head, and this is interesting when we consider the frequency with which the membranes of the brain are adherent to the cranium about this site or to the The gait of a general paralytic is somewhat peculiar. It is like his handwriting, it lacks firmness and stability. loose, rollicking movement of the body in walking is common; walking firmly and perfectly straight is the exception.

The pathology of the disease is most interesting. One accustomed to observe the lesions of other organs than the brain can scarcely help coming to the conclusion, when watching the post-mortem appearances of the nervous system of general paralytics, that the disease is essentially a chronic cirrhosis, accompanied by wasting and softening of the nervous tissue. The thickened adherent membranes have their analogue in the pleuritic membranes in pleurisy; the granulations in the fourth ventricles of the brain suggest to the mind the granulations of another organ—the kidney in Bright's disease. Is the disease a chronic interstitial inflammation or a degeneration pure and simple? We know that the former is liable to be attended by degenerative processes. Gull and Sutton, on the other hand, believed from their researches in Bright's disease that there was a degeneration—the hyalo-vascular that may affect all the organs and vessels of the body, but not necessarily simultaneous; then, this new theory might be No doubt, it is a limited view to associate all forms of arterial degeneration with kidney disease. It is not uncommon to find very much thickened arteries in chronic Digitized by GOOXI

phthisical subjects, even after all active manifestations of phthisis have died out, and the patients seem to be quite well. Arterial changes are not linked with one bodily disease, but Undoubtedly, cirrhosis of the kidney hastens with many. this change in a remarkable manner. At the same time, both the changes-kidney and arterial-may originally be induced by one and the same morbid condition, say of the blood. Yet, the disease of the kidney adds a fresh and serious element favouring arterial degeneration. We have good clinical grounds for believing that there are certain cachexias of the blood that may bring about wide-spread cirrhotic changes, but these morbid blood states require further elucidation. In a general way, we may speak of them as toxic states of the blood. Chronic gouty blood is a well-known condition for favouring and inducing cirrhotic changes, particularly of the kidneys, joints, and valves of the heart and blood-vessels generally, and emphysematous states of the lungs and softening of the brain, generally preceded by arterial changes. But gouty blood, as far as I know, does not bring about general paralysis. Secondly, a chronic rheumatic condition of the blood induces changes similar to those induced by gout, but, here again the brain is not the organ of election for morbid action, yet we know the brain may be sometimes affected—cerebral rheumatism of Trousseau. We have still to find the blood cachexia, if there be one, that induces general paralysis of the insane. The fact of syphilis being frequently the undoubted cause of general paralysis strengthens our belief in a blood cachexia in this disease. Possibly, inordinate drinking of bad spirits may have something to do in inducing such a state. Debauchery and excessive venery form, to my mind, the predisposing causes of this disease. They tend to produce and keep up an active hyperæmia of the nervous system, and it is not at all difficult to conceive of a toxic state of the blood completing the chronic inflammatory change. Again, the exalted, restless, and maniacal character of the patient during the early stage clearly betokens that there is an active morbid change at work. We can scarcely imagine a quiet, simple, intrinsic degeneration accounting for these symptoms.

The earliest symptom of this disease I have been able to trace is restlessness of body and mind. Getting up out of bed at night and wandering in restless fashion through the house is about the earliest symptom. The patient cannot find peace in bed, and wants to be about, perhaps sitting at the fireside brooding and not knowing well what is the matter with him. This, then, may be the very first indication of the disease.

Secondly, follows a mischievous and irritable condition, the patient requiring great nicety in manging his temper at home. and after that the disease is generally well established. If such be the clinico-pathology of the disease, then follow certain well defined indications for treatment. The early stages of the disease must be met by sedative and calmative measures. I would suggest all stimulating food and drink to be interdicted, and the patient put on a vegetable and milk food Secondly, the skin should be appealed to to relieve the deep-seated nervous system. To my mind, gentle and prolonged diaphoresis might be kept up for months by the use of warm baths, or perhaps jaborandi. Undoubtedly, general paralytics improve in warm weather, but this applies to nearly every ailment. Regulation of bowels; bromide and iodide of potassium might be given; the former for its calmative effects, the latter for its well-known action over chronic inflammations. A few leeches to the nape of the neck might be an advantage. Blisters, strychnine, &c., might be used for after-treatment. When the disease is far advanced, these measures would probably be fruitless, and might do more harm than good, but I consider they fulfil the rational indications for treatment during the earlier stages of the disease. I would confine the patient to bed during the above treatment, believing that absolute rest to body and mind is urgently needed.

As far as I know, general paralysis is generally treated on purely hygienic grounds. There has been no serious attempt to deal with it as an acute or subacute disease, and a stray recovery here and there has been reported. These recoveries being so rare, the profession has got to believe the disease is invariably fatal, and, as a consequence, the patients are made as comfortable as possible in our asylums, and perhaps get soporifics, but that is all that can be said. I am of opinion that, if the patients could be got in that early restless stage,

something might be done for them.

P.S.—Grinding of the teeth is not an uncommon symptom in general paralytics who are bedridden, and it is a sad spectacle to watch a general paralytic continually grinding away his teeth, until they are so worn down as to resemble those of a horse about twelve years old. This grinding of the teeth resembles, in a general way, the chewing of the cud in cows. I have only noticed it in general paralytics. It is a sort of automatic grinding, going on incessantly, unless the patient be asleep. Perhaps some would consider it a fresh proof of the Darwinian theory of evolution. In this connection,

I cannot help remarking the condition of two imbecile twin sisters about 19 years of age. They would sit, if permitted, all day long in their chairs, working with the tips of the fingers of both hands, as if they were picking at objects, very much in the same way as monkeys behave.

But, perhaps, the most striking feature that one observes in a body of lunatics is that, in insanity, the social instincts are among the first things to be lost. This loss become absolute

in profound melancholia and confirmed dementia.

# CASE OF EXTENSIVE BURNS OF THE FACE, EYES, AND SCALP, CAUSED BY MOLTEN BRASS.<sup>1</sup>

By JOHN COULSON HOWIE, M.A., M.B., C.M., L.M.,

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On the evening of Friday, 5th March, 1897, shortly before eight o'clock, I was summoned to attend A. H., an apprentice brassmoulder, who had met with a severe burning accident. About half-past seven o'clock that evening the lad was throwing solid brass into a crucible to be melted. As some of the metal was wet, whenever it came into contact with the molten brass it made the crucible burst with tremendous force, spattering part of the contents over the scalp and face of my patient. Fortunately he had a tweed cap on his head, which protected him so far; but the front half of the cap was riddled with burnt holes, through which the molten metal had penetrated like shot, and the result was that there were eleven distinct burns over the front half of the crown of the head through the cap, and these varied in size from half an inch to an inch and a half in diameter.

But the greatest severity of the burn was on the eyelids and eyes, nostrils, sides of the face, lips and tongue. The outer surfaces of the eyelids of both eyes were very badly burnt, the eyelashes and eyebrows were singed, while on the inner surface of the left lower eyelid, at the angle between the eyelid and the eyeball, a piece of solid brass, a quarter of

<sup>&</sup>lt;sup>1</sup> A paper read at a meeting of the Glasgow Southern Medical Society on 29th April, 1897.

an inch long by one-sixteenth of an inch broad, had burnt a double groove for itself, one on the eyelid and the other on the eyeball, and it had to be forcibly removed by forceps. Numerous small fragments of metal were dotted over the sclerotics of both eyes, and also over both caruncles, and these were carefully removed by forceps and scrapers. Fortunately no injury appeared to have been done to the cornea of either Particles of metal and dust were peppered over the forehead and both cheeks, especially the left, and these were carefully removed. The burns on the anterior half of the crown of the head above referred to were pretty deep, and caused much blistering of the skin, accompanied by great pain. The whole of the hair of the scalp was singed to the roots. A burn was observed on the anterior surface of the helix of the left ear, and another as far back as the nape of the neck (beyond the posterior margin of the tweed cap). Both lips and the anterior third of the tongue were badly scalded, and were denuded of epithelium, as were also the nostrils; and these were all extremely painful.

Three scalded patches, each about the size of a split pea, were also noted at the back of the mouth on the pillars of the fauces.

After removal of the fragments of metal, all the burnt surfaces on the face and scalp were thoroughly cleansed with soap and water. Dressings consisting of wet boracic acid lint, covered by guttapercha tissue and fixed on the head by a gauze bandage, were applied in order to thoroughly cleanse the burns and prevent inflammation. Above these was placed cotton-wool, kept in position by a triangular bandage. In order to anticipate inflammation the patient was put upon upon half-drachm doses of sulphate of magnesia, with dilute sulphuric acid and bitters every four hours, and slop diet was ordered.

6th March.—The patient had a fairly good night's rest. The burns were dressed morning and evening. They were washed with hot boracic acid solution. Discs of cocaine and and atropine were inserted into the eyelids to dilate the pupils and relieve pain. After hazeline ointment had been applied to the blisters, poultices made of wet boracic acid lint covered by guttapercha tissue were put on, and these were surmounted by cotton-wool kept on by a triangular bandage. Bovinine was ordered every two hours in 40 minim doses. The sulphate of magnesia mixture was continued.

7th March.—There was much puffiness of the face and eyelids. The burns were dressed morning and evening with

bichloride of mercury solution (1 in 3,000), and boracic poultices were again applied, and cocaine and atropine discs inserted.

8th March.—The left lower eyelid tended to adhere to the eyeball, and had to be forcibly separated by a director. The burns were dressed morning and evening with mercurial lotion. Wet boracic acid dressings were applied after anointing the eyelids with hazeline ointment. Cocaine and atropine discs were inserted under the eyelids.

9th March.—Dressed morning and evening. Boracic poul-

tices continued.

10th March.—Both eyelids much swollen, especially the left, as also the sides of the face. Profuse yellowish-white discharge, without odour, below the eyelids, especially the left. Adhesions tend to fix the eyelids to the eyeballs, and have to be broken down by a director. Eyelids washed with boracic lotion. Gauze inserted below lower eyelid of left eye. Boracic poultices again applied. Patient visited to-day by Dr. Robert Brown, factory surgeon, for official report.

11th March.—For the next three days the burns were dressed thrice daily. They were first washed with bichloride of mercury lotion (1 in 3,000), then a large brass syringe with finger rests was used to douche out the space between the eyelids and eyeballs. The eyelids were anointed with hazeline

ointment, and boracic poultices applied externally.

12th March.—Much conjunctivitis and swelling of the eyelids and cheeks. Ordered a lotion of boracic acid, sulphate of

zinc, and rose water to syringe out the eyelids.

13th March.—Last lotion very soothing. Eyelids syringed out thrice to-day. Ordered a mixture of sulphate of magnesia, sulphate of iron, sulphate of quinine and bitters every four hours.

14th March.—Dressed twice daily with zinc and boracic lotion for the next five days. Boracic acid poultices. Conjunctivitis and swelling of the cheeks rapidly disappearing.

18th March.—Right eye now quite better; dressings for it

stopped.

19th March.—Left eye healing well. Continue syringing with boracic and zinc lotion, and boracic poultices. Poultices of linseed meal and bread crumbs to be applied to the burns on the scalp to remove the crusts. Ordered a mixture of cinchona, nux vomica, sulphate of magnesia, and infusion of gentian.

20th March.—From this date onwards until the 31st the dressings were changed daily and the eyelids syringed out;

and after that date he was dressed every second day until

7th April.

25th March.—Ordered emulsion of cod liver oil and hypophosphites of lime, potash, and soda—a dessert-spoonful thrice daily after food. For about a fortnight after the accident the patient suffered much from loss of appetite and nausea; but these have now both disappeared, and he takes his food well. There had also been for some days an offensive odour with the motions, but this has now quite disappeared. The patient feels very well, and suffers now absolutely no pain whatever from either eye, although at first the pain was almost unbearable, especially in the left eye. There was marked swelling of the eyelids of both eyes and of the left side of the face from the third till the ninth day after the accident.

6th April.—On account of a puckered and ulcerated condition of the edge and anterior surface of the lower eyelid of the left eye, with a number of cicatricial bands of adhesion between the lower eyelid and the eyeball, and some conjunctivitis resulting from the burn, it is found necessary to still continue the dressings until the burnt surfaces are entirely healed up, and the tendency to conjunctivitis from exposure to cold and dust is entirely removed. For several days the use of cocaine and atropine discs has been resumed in order to prepare the eyes for ophthalmoscopic examination by

dilating the pupils.

7th April.—The patient was carefully examined by me to-day. The scars of the burns on the scalp, face, left ear, lips, tongue, nostrils, throat, and nape of neck have quite healed up. The eyes were tested carefully. They are quite normal for both distant and near types. With both right and left eyes, separately and also together, he sees Snellen's smallest test types (\$\frac{1}{6}\$) in the distance; and with each eye separately, and also together, he sees Jaegar's smallest test types (J 1) for near objects. When examined by the ophthalmoscope nothing abnormal can be made out in the interior of either eye.

The only traces of burns in the eyes are to be found in the left lower eyelid, where there are a few bands between the eyelid and the eyeball, and a shallow scar along the edge of the eyelid. These do not interfere at all with his vision.

He sleeps well, takes his food well, has no headaches, and is very active both in mind and body. He will be ready for work in a short time, but is advised to wear a shade over the left eye to protect it from dust and wind. I do not think any real permanent injury will be suffered by the patient.

I advised that he should go to Lenzie Convalescent Home for a few days before resuming work in order to get up his

strength.

13th April.—Patient examined to-day. Left lower eyelid looking very well in spite of the changeable weather. No intolerance of light. No discharge of any kind from the

evelids and no conjunctivitis.

28th April.—Still further improvement in the left lower eyelid, which has healed up very well. The deformity in the lid is much less than on 12th April, and there is not much interference with the movements of the left eyeball. The left eye is thoroughly protected by the upper eyelid. There is no conjunctivitis and no intolerance of light. His appetite is good. He sleeps well. He has no headaches, and his general health is much improved.

## Obitnary.

## THE LATE SURGEON C. J. FYFE, R.N.

It was with feelings of deep regret that the many old college and infirmary friends of the late Charles James Fyfe, M.B., C.M., heard of his recent death while taking part in the expedition against the King of Benin. Brought up in Lenzie, he commenced the study of medicine at Glasgow University in 1884, and graduated in 1888. After qualifying, he spent some time as surgeon on one of the "Castle" liners, and also rendered yeoman service to the sick during a trip he took with the North Sea fishing fleet. In 1891 he obtained a place in the open competition for the post of surgeon in the Royal Navy, and during the six years he served at sea he saw a large amount of active service. Dr. Fyfe was mentioned in despatches in 1894 for conspicuous coolness in attending the wounded under fire; and though his time as surgeon in the St. George was up at the end of last year, he went to the front with Admiral Rawson's column when ordered up to capture Benin city. The career of a promising officer, and the best of good fellows, was there cut short by a bullet in the neck while attending on the late Captain Byrne, R.M.L.I., who had been severely wounded. The circumstances of his death were characteristic of the man. Being severely harassed by shots from the bush while helping his wounded shipmate, Dr. Fyfe turned round, and with his revolver tried to silence the fire which was annoying him, and it was then he received the wound which proved to be fatal. His early death will be mourned by all who knew him, and more especially by those who were his intimate friends.

#### CURRENT TOPICS.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.—The following office-bearers have been elected for session 1897-98:—

President

DR GRO S MIDDI PROV

President,	•	•	•	•	Dr. Geo. S. MIDDLETON.				
Section of Medicine.									
Vice-President,	. •				. Dr. Alex. Napier.				
Councillors, .	•				Dr. Maitland Ramsay. Dr. John Love.				
Secretary, .	•		•		. Dr. HINSHELWOOD.				
Section of Surgery.									
Vice-President,					. Dr. Newman.				
Councillors, .	•	•			· { Dr. John Barlow.				
Secretary, .	•		•		. Dr. J. H. NICOLL.				
Section of Pathology.									
Vice-President,	•				. Dr. Walker Downie.				
Councillors, .	•				DR. RUTHERFURD. DR. W. K. HUNTER.				
Secretary, .			•		. Dr. R. M. Buchanan.				
Section of Obstetrics.									
Vice-President,			•		. Dr. Geo. Halket.				
Councillors, .	•				Dr. Edgar. Dr. J. M. Munro Kerr.				
Secretary, .			•		. Dr. Balfour Marshall.				
Treasurer,					MR. HENRY E. CLARK.				
General S	ecretary,		•	•	Dr. C. O. HAWTHORNE.				

West of Scotland Clinical Research Laboratory.— Most of our readers will have already received the prospectus of this Laboratory, which has been opened in Anderson's College, under the direction of Drs. R. M. Buchanan, R. Barclay Ness, and John H. Teacher. We very cordially wish the

venture every success, and we feel sure that practitioners in Glasgow and the West of Scotland will welcome the enterprise as a distinct assistance to them in their work. Hitherto, we think, general practitioners have had a hesitation in getting many of the examinations of the kind conducted in this laboratory made, chiefly because they felt that they were trespassing upon the time of the overworked pathologists of our general infirmaries, and because they did not like to have such examinations conducted for nothing. We are sure then that when they consider the moderate fees at which all the more important investigations can be carried out, they will cordially support the venture.

#### MEETINGS OF SOCIETIES.

## GLASGOW MEDICO-CHIRURGICAL SOCIETY.

Session 1896-97.

MEETING X.-5TH MARCH, 1897.

The President, DR. W. L. REID, in the Chair.

I.—A CASE OF SPASMODIC TORTICOLLIS CURED BY OPERATION.

By Mr. R. H. Parry.

The patient, as shown to the Society, professed himself to be in good health, and his appearance confirmed this statement. Some two years ago he developed spasmodic torticollis, and in consequence of this was compelled to relinquish his occupation as a boilermaker. The head had been turned strongly to the left side, and the chin markedly elevated, and this condition persisted even after resection of the right spinal accessory nerve. The man had been discharged from hospital as incurable. Subsequently, he was admitted to the Victoria Infirmary, and expressed his desire to be operated on, however great the risk, his condition causing him so much inconvenience and annoyance. Mr. Parry, after observing the case for some time, came to the conclusion that the muscles at fault were probably the post-occipital group on the left side, and determined to divide the posterior primary divisions of the upper Digitized by GOOGIC

cervical nerves. The operation had proved quite successful, the patient having since its performance—upwards of a year age—been entirely free from all distortion of the head.

II.—DEMONSTRATION OF SPECIMENS REMOVED BY OPERATION.
By Mr. R. H. Parry.

Mr. Parry submitted a number of specimens, and discussed the features of interest in connection with the cases they represented. The specimens included a group in which the uterus had been removed in consequence of the existence of uterine fibroids causing hemorrhage and other pelvic disturbances; in two of the cases there was also pyo-salpinx and an ovarian tumour. In another group was a tubal pregnancy, removed in the second month of gestation, and showing the ovum in situ; also, a uterus and appendages removed for long-continued and very obstinate chronic metritis. Mr. Parry further showed a segment of the small intestine resected on account of fibrous stenosis which had produced chronic intestinal obstruction; and a scapula removed, with its attached muscles, in consequence of the growth of a parosteal sarcoma.

MEETING XI.—19TH MARCH, 1897.

The President, Dr. W. L. Reid, in the Chair.

## LANTERN DEMONSTRATIONS. A. By Dr. D. J. Mackintosh.

Dr. D. J. Mackintosh gave a lantern demonstration to illustrate the value of the x rays in hospital practice, more especially as regards dislocations and fractures. The slides exhibited demonstrated (1) the value of the rays for diagnostic purposes in cases where the physical examination is not conclusive; (2) the actual displacements which occur in various classical fractures; and (3) the conditions which exist in ununited and badly set fractures. Among the most striking of the photographs were those illustrating congenital dislocation of the head of the femur, the presence of a coin in the small intestine, and several dealing with various injuries in the region of the elbow-joint.

Dr. Mackintosh also illustrated the use of the cinematograph for purposes of medical demonstration. He threw upon the screen a series of rapidly-taken photographs of patients suffering from locomotor ataxia, diphtheritic paralysis, and hemiplegia, and in each case the characteristic peculiarities of the gait were very manifest.

#### B. By Dr. MAITLAND RAMSAY.

Dr. Maitland Ramsay gave a lantern demonstration to illustrate the diseased conditions of the eye due to syphilis. A report of the cases on which the demonstration was based will be published in a future issue.

## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1896-97.

MEETING VII.—12TH APRIL, 1897.

Dr. D. N. Knox, in the Chair.

I .-- TWO CASES OF INTRA-OCULAR TUMOUR.

BY DR. MEIGHAN.

The two cases which I now present to the Society show the clinical aspect of intra-ocular tumours. One patient is a child from whom the left eye was removed about a year ago for intra-ocular tumour, and a similar growth now shows itself in the other eye. The other patient is a woman in middle life, in whose eye an intra-ocular tumour is now seen. It is known that intra-ocular sarcomata may present themselves in infancy or in middle life. The subject of sarcoma of the choroid in infancy is of interest both in its clinical and pathological aspects. Clinically, it is difficult to determine whether a tumour originates in the choroid or retina, but so far this point is unimportant. Pathologically, it is important. In the examination of the enucleated eye of the child we find that the tumour is a sarcoma that had originated in the choroid.

CASE I.—G. C., aged 2 years, was brought to the Eye Infirmary in April of last year, and presented the following

condition:—The left eyeball was enlarged in all diameters, especially marked in its antero-posterior axis, and was protruding between the lids. The whole ball had a darkish appearance, and the cornea was so opaque that the interior of the eye could not be seen. On palpation the tension was found increased. The right eye was normal in appearance.

History.—The mother states that, when the child was 2 months old, she noticed a small whitish body in the interior of the left eye. This body grew bigger, and the eye became inflamed. The child was fretful, and its general health was impaired. It is the youngest of three; the other two are alive and healthy. Both parents are alive, and present nothing special in their history.

The left eye was enucleated a month after the first examination. The child made a rapid recovery, and seemed to gain in

general health.

The child was again brought under observation, for a similar condition of the right eye, eight months after the enucleation of the left eye. The following condition was noted:—A small whitish body, about the size of a large pea, was seen in the interior of the eye, a little behind the iris, in the lower and outer quadrant. There was no congestion of the ball, and the pupil was active; at this stage the child could see objects when held to the outer side. The above appearance was first seen by the mother five months ago. The present serious condition was explained to the mother, and she returned to her home in Dunifries.

Last week she brought the child again, and it was seen that the tumour had grown much larger, and had invaded nearly the whole of the posterior cavity of the eye. The cornea, anterior chamber, and iris are still quite free of any invasion, and the tumour is well seen through the pupil. She has now absolutely no vision, and has not as yet suffered much in general health.

The points of interest in this case are, that both eyes have been affected with intra-ocular tumours. The tumour in the second eye began a year after the origin of the tumour in the first eye. The fact of the tumour appearing in a similar site in the second eye renders it an interesting fact, that, at the present date—which is now about a year since the removal of the first eye—there is no appearance of a recurrence in the left orbital cavity.

Dr. Leslie Buchanan made a pathological examination of the left eyeball, and the following is his report:

"The eyeball measures externally in its greatest (the anteroposterior) diameter 28 mm. (22 mm. being the normal for a child of this age). The increase is accounted for principally by a distension of the posterior part of the sclerotic, the anterior part and the cornea being only slightly stretched. The tension of the globe post-mortem is increased to +1.

"On the half being opened by (transverse) horizontal

section the following appearances are noted:-

"The anterior chamber is abolished, the corneo-iritic angle being entirely obliterated by the pressure forwards of the iris and lens.

"The ciliary body is smaller even than is usual in a young child, being much pressed upon, but showing no sign of inflammatory disturbance.

"The lens is very large indeed, measuring 4.5 mm. antero-

posterior diameter by 9 mm. transverse diameter.

"The retina is separated from the choroid and pressed forwards against the posterior surface of the lens, from whence it turns back and is quickly hidden in a mass of whitish exudate which lies behind and seemingly partially surrounds it. This exudate is of almost fluid consistence at the anterior part, but becomes firmer behind towards the optic nerve entrance, to which this firm portion is evidently attached.

"It is impossible to make out the exact connections of this exudate further than above; a considerable portion of the fluid matter escaped, however, when the eye was opened, and gave the appearance of coming from behind the retina. Microscopic examination of this fluid exudate showed that it consisted of a clear fluid holding in suspension large numbers of oil or fat globules of small size, round cells, and calcareous particles only.

"Projecting into the post-retinal space there are found two plaques of choroidal thickening, of almost circular shape, one lying to the inner the other to the outer side of the optic

nerve entrance.

"The plaque lying to the inner side extends from the optic pore for a distance of 13 mm. along the choroid, and attains a maximum height of 7 mm.; that to the outer side of the pore begins at about 10 mm. from the pore and extends for 12 mm. outwards, attaining a height of 9 mm.

"These two masses are of soft consistence and flocculentlike appearance, and are of a very light grey colour; further, although they are in contact with the soft exudate around

they do not seem to be continuous in any part.
"The optic nerve is thicker than normal.

"Microscopic Examination.—The anterior segment of the eyeball shows only evidences of pressure and condensation, there being nowhere any distinct evidence of inflammatory action. The ciliary processes are found to be pressed forwards and flattened out upon the posterior surface of the iris by the lens.

"In the posterior segment it is found that the retina is separated entirely and broken up, ceasing to be recognisable close behind the lens. There is thickening of some of the layers, but no evidence of glioma.

"Examination shows that the solid portion of the exudate is in direct continuity with the optic nerve, and that it is evidently a tumour of sarcomatous nature growing in the retina.

"It is composed of round cells of smooth outline and medium size, with large nuclei and little or no protoplasm, lying almost without intercellular substance in some parts, though elsewhere having a fair quantity of fine fibro-cellular tissue and vessels. Only at one point is there any evidence of structure, and this consists of a group of spaces, like transverse sections of channels, lined with what strongly resembles columnar epithelium, and in some cases containing in the cavity loose epithelioid cells. This apparent structure is situated close to the optic nerve entrance. Whether these structures are vascular or lymphatic it is impossible to say.

"The margin of this solid mass melts gradually away into

the fluid exudate.

"To the inner side of the optic pore it seems probable that, by a reflecting of the membrane of Bruch which is elsewhere intact, there is a direct continuity between the retinal and the

choroidal growth.

"This latter (the choroidal growth) consists of densely packed round or ovate cells of medium size, which show no definite relationship to the blood-vessels, but which, seemingly, lie in groups between the tibrous bands of the choroid, and by separating them give rise to a lamellated appearance.

"Apart from these lamellæ there is no evidence of fibrous tissue formation, and it is seen that there are large numbers of round cells without any evidence of an inflammatory disturbance. The choroid appears to be healthy apart from

these two plaques.

"There is a considerable amount of infiltration of the optic nerve, which might be either tumorous or inflammatory. The sclerotic, beyond thinning and the fact that one or two bloodvessels passing through it from the choroidal growths have small trains of round cells, seems to be unchanged."

CASE II.—The second case is that of a woman, aged 48 years, who presented herself six months ago, complaining of dimness of vision in the right eye, and of dark spots floating in front of the sight. Her vision was better for objects held to the outer side of the field of vision. She could read No. 14 J with this eye, and No. 2 J with the left. She also complained of occasional pain in the right eye and temple. On examination by the ophthalmoscope, a separation of the retina was found in the outer aspect, in the region of the equator of the ball. The tumour was observed to be dark coloured, and did not fluctuate on movement.

At this stage it was conjectured that the separation was due to an intra-ocular growth. Further examination a month later showed that the tumour had increased in size, and could be seen by focal illumination through the pupil. It was seen to be of a reddish-white colour, and apparently occupying nearly the whole of the outer half of the posterior chamber of the eye. The cornea and anterior chamber were clear, and the iris was acting; tension of the ball was increased. She states that the vision became affected about a year ago, and can give no history to account for it. She has had fifteen children, twelve living and in good health. Husband alive, and no special history can be noted.

Enucleation of the eye has been recommended, and I may have an opportunity of showing the tumour and its pathological condition to the Society at a subsequent meeting.

#### II.—SPECIMEN OF OLD-STANDING OSTEOMYELITIS.

#### BY DR. RUTHERFURD.

Dr. Rutherfurd said this was an old-standing osteomyelitis which had become almost altogether obsolete, and, within six weeks of the specimen being obtained by amputation, the patient had been troubled with arthritis of the knee. There were two points of importance to notice in the case. (1) Careful enquiry failed to find out the history of the osteomyelitis. The man is now aged 62 years, and is deaf and stupid, but he served through the Crimean campaign, and had no scars about him then. He may have had osteomyelitis of youth not attended by scar nor deformity, and the disease may have lit up again late in life. He was probably turned 20 before the first attack came on. After that age attacks are rare, but there are cases recorded up to 20 and even 30 years of age; yet, after 20 the cases are difficult to authenticate. (2) The

process of cure is shown to be not an absolute sclerosis, but a laying down of a vascular dense fibrous tissue, in the midst of which there existed a cavity filled with material like apple jelly. At the lower part of the shaft proper there were smaller cavities; the ends of a sinus containing green pus, and having sloughy walls. The route by which the joint became affected was through the sinus formed by the giving way of the cancellous tissue between the two condyles, at a point somewhat nearer the outer one.

## III.—HYSTERICAL SPASM OF THE ABDOMINAL MUSCLES.

By Dr. R. M. BUCHANAN.

H. M., æt. 18, came under observation on the 22nd March, 1897, for jerking movements of the abdomen, which began on the 28th February. There was no personal or family history of neuroses. She suffered two years from indigestion and sore throat. The treatment adopted was by blistering the skin over the muscles, but the condition still persisted.

#### IV.—SPECIMENS.

#### BY DR. TANNAHILL.

- 1. The specimen submitted to your notice forms part of a skeleton of the gorilla which was brought from South Africa by Frank E. Manning, University College, London. On examination externally a certain fusiform enlargement, due to callus, was seen about the region of the deltoid insertion, and a vertical saw-cut through the region of callus showed the compact bony walls of the shaft embedded in the callus and the re-established lumen of the medullary canal. There was no lateral deformity, and little change in the angle of torsion, and the amount of shortening was barely half an inch. Similar cases are referred to in Hartmann's Anthropoid Apes. The perfect union with little deformity is certainly remarkable in an animal leading a life of active movement in a wild state.
- 2. The second specimen brought to your notice is a fossil human ulna; the lower end of the shaft is imperfect, but the upper end is fairly well preserved, and shows the olecranon and coronoid processes, and the sigmoid notches are well represented. The posterior border of the ulna at the upper end of the bone is more convex than in modern bones. The specimen was obtained from the Thames valley gravels, and is probably of great antiquity.

Dr. Knox said the specimen showed an undoubted oblique fracture of the humerus.

Mr. Maylard referred to this humerus as a good example

of united fracture in animals.

Dr. Fergus said that his brother had many examples of united fractures of the bones of birds, which he would have pleasure in showing at a subsequent meeting of the Society.

V.—THREE CASES OF NEPHRECTOMY: ONE FOR CALCULOUS PYONEPHRITIS, FATAL FROM SHOCK; TWO FOR TUBERCULAR PYONEPHRITIS, SUCCESSFUL.

#### BY MR. MAYLARD.

CASE I.—Calculous Right Kidney—Nephrolithotomy— Nephrectomy—Death from Shock.

The following is an abstract of report taken by Dr. Alex.

M'Lennan :-

Mrs. C., et. 21, was admitted to the Victoria Infirmary on 31st October, 1895. About two months prior to admission the patient first became aware of her urine having a white deposit and a bad odour. A little later she began to complain of pain in the right side, shooting in character and worse at night. She has frequency of micturition, rising some three or four times during the night. For four or five days before entering the hospital she stated that she had repeated attacks of shivering. On admission, an examination of the abdomen revealed a large hard tumour lying below the liver and felt both in front and behind. The urine, when examined, presented a very heavy deposit of pus and a highly ammoniacal smell.

12th November.—With the assistance of Dr. Andrew, nephrotomy was performed; a quantity of very feetid pus escaped and numerous stones of various sizes were removed. The abscess cavity was freely irrigated and drainage-tubes inserted. As no very marked improvement followed in the way of there being less pus, either in the urine or in the discharge from the wound, and as the patient appeared to be distinctly losing ground, lumbar nephrectomy was performed on 14th January, 1896. When the kidney was reached, the capsule was found to be much thickened and adherent to surrounding parts, so that that an attempt was first made to remove it and the kidney together. This, however, soon proved impossible; so the kidney itself was then easily enucleated and the thickened capsule taken away afterwards. This proved both difficult and tedious, involving division of the last rib and the opening of the peritoneal cavity.

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prevent infection of the latter it was partially stitched up and plugged with iodoform gauze. At the conclusion of the operation, which occupied one hour and thirty-five minutes, the patient was much collapsed; later, she showed no signs of rallying, and eventually died eighteen hours after the operation, never having come out of the shock.

The kidney, on examination, was found to be completely destroyed as regards normal structure: it consisted of numerous smooth-walled cavities distended with very feetid pus and containing in some cases calculi resembling those removed at the earlier operation of nephrotomy. In one or two places the lining wall of the cavity was so thin that it tore in separating the organ from its capsule; the capsule itself was enormously thickened, especially at its lower part where, at the operation, such great difficulty was encountered in detaching it.

CASE II.—Tubercular Left Kidney—Successful Catheterisation of Ureter by Howard Kelly's Method—Nephrotomy, subsequently Nephrectomy—Recovery.

The following is an abstract of report taken by Dr. E. J.

Primrose:

Mrs. C. H., et. 24, was admitted to the Victoria Infirmary. under the care of Dr. Alex. Napier, on 10th April, 1896. About a month after her confinement, two and three-quarter years ago, she first began to complain of pain in left lumbar region and shooting down into the groin. Along with this she had nausea and severe headache, chiefly frontal. symptom has continued with variable degrees of severity up to present time. She has noticed an increasing frequency in micturition, but otherwise no marked symptoms until about three weeks before admission, when she commenced to have rigors; her urine she noticed becoming thick and cloudy, and she was constantly feeling a desire to micturate. admission, and when examined under chloroform, a distinct tumour was felt in the left renal region. The urine, when examined, contained a quantity of pus, and was almost neutral in reaction (when tested on another occasion it was acid).

11th April.—With the assistance of Dr. Andrew, nephrotomy was performed and an abscess cavity opened in the kidney, from which a fair quantity of pus escaped, but not so much as had been expected from the state of the urine. The finger when introduced felt a trilocular shaped cavity—no stone detected. A large indiarubber drainage-tube was inserted, and

the wound dressed.

For some weeks patient showed slight improvement, but

urine and pus came freely from the wound, and pus also was still present in urine per urethrum. On 3rd July, Dr. J. K. Kelly catheterised the ureters by means of Kelly of Baltimore's instruments. The catheter, passing into right ureter, drew off normal urine, which, on microscopic examination, showed no signs of pus cells. The left ureter was not catheterised, but drops of pus were distinctly seen exuding from it. On 7th July lumbar nephrectomy was performed; the kidney was stripped of its capsule until near the hilus. Here there was so much thickening and matting of tissues that it was impossible to separate the vessels and ureter from the thickened mass. The latter was therefore clamped as a whole and ligatured in three pieces. The patient was not much collapsed after the operation. Her recovery was somewhat slow, and she left the hospital on 17th September.

The following is the statement of her condition in report on dismissal:—"Wound almost healed; patient is able to go about without having any discomfort. She has gained in weight considerably of late. On 3rd June she was 5st. 8lb.; she is

now 8st. 5lb. The urine is quite free of pus."

The kidney was found to be much enlarged, and lobulated in contour. On section it presented a number of separate abscesses distinct from each other and containing curdy matter. These cavities were in size about that of a small marble; the parts above the hilus were much thickened by well organised inflammatory tissue, and the separate parts could not be differentiated.

CASE III.—Tubercular Right Kidney—Nephrectomy—Cure.
The following is an abstract of report taken by Dr. E. J.
Primrose:—

Mrs. H., æt. 30, was admitted to the Victoria Infirmary, under the care of Dr. Eben. Duncan, on 5th June, 1896. Her symptoms appear to have commenced about fifteen months previously, when she first felt pain in her right side; she kept her bed for a week or so and felt better, but on attempting to move about again it recurred. Her urine began to pass more frequently, and the pain, which assumed a sharp burning character, passed down into the inguinal region. A few days before admission she discovered a movable tumour in her right side in lumbar region. Dr. Peden, under whose care she was before admission, stated that she had had some elevation of temperature. The urine examined microscopically was found to contain pus cells, and was acid in reaction.

12th June.—With the assistance of Dr. Andrew nephrectomy

was performed. The kidney was easily separated from the capsule, and the ureter, renal vein and artery easily detached at the hilus, and each tied separately.

Patient suffered considerably from shock after the operation, but eventually rallied well and made a slow but complete

recovery, leaving hospital on 26th September.

The kidney when examined by a median incision showed some three or four distinct abscess cavities, that is to say, independent of each other and of the one opened at the time when the kidney was being explored prior to removal. No calculi were detected. The abscesses appeared typically tubercular in character; little or no healthy renal substance was discoverable.

Remarks by Mr. Maylard.—Without wishing to draw too many conclusions from these cases, I cannot help feeling that something is to be learned from them. To me, at least, they have taught something. In the first case, I believe I should not have lost my patient if I had been satisfied with attempting the removal of the kidney without its capsule. That could have been rapidly done, and the capsule, which was so thickened and adherent to parts around, would in time have shrunk and become organised into cicatricial tissue in common with other inflammatory tissue around. The patient's death was due solely to shock, and there is but little doubt that removal of the greatly thickened and adherent capsule, involving as it must have done a considerable disturbance of the sympathetic plexuses about the region of the supra-renal body, went far towards effecting the fatal result.

With regard to the second case, I was as greatly impressed as others present with the remarkably successful catheterisation of the ureters by Kelly of Baltimore's method, which was kindly executed for me by my friend, Dr. J. K. Kelly. To actually see the orifices of the ureters, and observe the urine or pus, as the case may be, drop, drop, drop from the ureter, is a visual proof which by no other method that I am aware of can be effected with such a degree of certainty. In this case it settled at once and unmistakeably the healthy condition

of one kidney and the diseased state of the other.

A third instructive point which two of these cases seem to me to bring out is the inadvisability of nephrotomy in tubercular disease of one kidney. In both my tubercular cases there were multiple abscesses in the substance of the kidney quite distinct and unconnected with each other. The lesson I derived from one case helped me, I believe, to correctly

deal with the second; for while I performed nephrotomy in in the first-opening a single abscess, subsequently being obliged to remove the whole kidney—in my second I performed nephrectomy at the first, and so cured my patient by a single and, I think, a simpler and safer operation than by proceeding in two stages. I know there is some little difference of opinion on this particular point, and perhaps I am inferring too much from a too limited experience, but given a case where a large quantity of pus is being passed in the urine and only a small abscess is opened by nephrotomy—such conditions as misled in my first tubercular case—I should say that to proceed with the total removal of the organ would certainly be the correct practice, presuming, of course, the other kidney to be healthy. It is for those whose experience is sufficiently large to say whether it is safer to remove a shrunken kidney in which a troublesome urinary fistula remains from the original nephrotomy or to remove a kidney entire at the first operation.

Dr. Knox referred to the interesting history of the three cases, and to the propriety of dealing with tubercular abscess of the kidney by removing the kidney at once. He also discussed the benefit to be derived from the Röntgen rays in diagnosing calculus of the kidney, and alluded to a case where a calculus was diagnosed by this method. The patient was relieved by nephrectomy, but later on a similar condition became established in the remaining kidney, and the patient succumbed.

#### VI.—INSTRUMENTS FOR EXAMINATION OF BLADDER.

Dr. J. K. Kelly showed instruments which had been designed by Kelly, of Baltimore, for examination of the bladder, and described their use.

Dr. Nicoll said he had used the instruments, and approved of them on the score of their simplicity, and being less costly than the ordinary cystoscope. He had never catheterised the pelvis of the kidney, and thought it a dangerous proceeding.

#### VII.-A SERIES OF INTESTINAL PREPARATIONS.

#### BY DR. SUTHERLAND.

Dr. Sutherland's paper will be published as an original article in a future issue.

### OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

#### Session 1896-97.

MEETING V.-27TH JANUARY, 1897.

The President, Dr. MALCOLM BLACK, in the Chair.

#### I.—SPECIMENS.

#### A. BY DR. ROBERT JARDINE.

Dr. Robert Jardine showed—(a) A complete membranous cast of the uterus of a young unmarried woman about 23 years of age. She had passed many such membranes previously. (b) A curious malformation of the umbilical cord due not to a knot, but to a twisted condition of the vessels.

#### B. By Professor Murdoch Cameron.

Professor Murdoch Cameron showed a photograph of a large ovarian tumour, of which the fluid contents measured 640 oz., and the cyst walls and solid part weighed 6 lb.

#### C. BY DR. JOHN EDGAR.

Dr. John Edgar showed a gravid tube, and an appendix vermiformis which he had been obliged to remove at the same time owing to previous attacks of appendicitis, especially during pregnancy, and the resulting adhesions.

#### D. By Dr. J. M. Munro Kerr.

Dr. J. M. Munro Kerr showed a complete abortion in which the structures could be very distinctly recognised.

## II.—A RÉSUMÉ OF TWO YEARS' WORK AT THE WEST-END BRANCH OF THE MATERNITY HOSPITAL.

#### By Dr. J. M. Munro Kerr.

I bring under your notice to-night a résumé of my two years' work at the West-End Branch of the Maternity Hospital. I do so because, on my appointment as physician to the district, this Society requested that reports of a similar nature to those given by Dr. Jardine when he held the post should be continued by his successors.

During the two years we have had 951 cases.

Number of women who were attended	d at th	eir own	
homes who were confined at ful	l time.		887
Who were confined prematurely, .			30
Who miscarried,	•		34
			951
	Boys.	Girls.	Total.
Children born at full time—alive,	486	391	877
,, ,, dead,	14	8	22
,, prematurely—alive,	5	9	14
", ", dead,	8	9	17
,, ,,,			
	513	417	930
There were 13 cases of	f twins.		
Operative Cases—			
Forceps,		. 3	<b>2</b>
Version,	•		4
Craniotomy,		•	1
Adherent placenta removed, .	•	. •	5
		-	_
		4	· <b>2</b>

There were two maternal deaths.

Before referring to the cases in greater detail, I would like just to say a word regarding their general management, and as our chief dread is septic infection, it is the means used to avoid this that I will briefly refer to. Before any vaginal examination of a patient is made, her external genitals between the buttocks and folds of the groins, and the fronts and inside of the thighs, are washed first with soap and water and then with some antiseptic such as perchloride, lysol, or carbolic. The hands of nurses, students, and doctors are cleansed in the same way. Instruments are boiled at home, and wrapped up in a linen case ready for use. A douche is given before delivery only when there is much vaginal discharge, and after delivery when the placenta and membranes, or portions of these, have been removed, when the fœtus has been born in a macerated condition, and when there has been much hæmorrhage. In spite, however, of the precautions I have mentioned, we had a considerable number of cases where the temperature rose above normal during the puerperium, and where from other signs and symptoms there were evidences of some septic absorption having occurred. cases were fortunately not serious, and with vaginal or uterine douching soon recovered. Indeed, of the 951 cases,

only two caused me any anxiety on account of the symptoms of septic infection they evidenced.

CASE I was where a hydatidiform mole was expelled naturally. The temperature immediately after the expulsion of the mass was 105°. On the following day it fell to 103°, and continued at that figure for about a week, after which it gradually returned to normal. The patient was very ill, had several rigors, lochia fœtid, pulse so rapid sometimes that it could hardly be counted. From the first I douched out the uterus twice daily; but owing to the fact that some portions of the degenerated chorion were being expelled from time to time, I curetted it on the third day of the puerperium, and removed a large quantity of feetid debris, consisting of the altered chorion and decidua. I was fully alive to the danger of the operation in such a condition; but as the patient was really so very ill, and as curetting seemed the only thing left to be done short of extirpation of the uterus, I considered it indicated. Her condition steadily improved after the operation, and ultimately she made a slow but good recovery.

CASE II.—Temperature on fifth day rose to 104°, with rigors and rapid pulse. It continued at that figure for two or three days, then fell to 103°, at which it continued for five days before it returned gradually to the normal. The case was one of plural pregnancy where one of the twins was born in a macerated condition, and the treatment was intra-uterine douching twice daily until the temperature reached normal,

and general febrile treatment.

For intra-uterine douching in septic cases I believe perchloride of mercury to be the best antiseptic. I have seen no evidences of poisoning by the drug; the solution used is 1 in 3,000, and is followed usually by boiled water.

#### MATERNAL DEATHS.

In glancing now at the maternal death-rate, you notice we have had two cases that terminated fatally. In reality, complications of labour or of the puerperium were accountable for only one of these, for the second fatal case was suffering from broncho-pneumonia when she aborted. She died of broncho-pneumonia on the second day of the puerperium. The temperature, pulse-rate, and respiration ran very high. Both lungs were very extensively affected. For the first fatal case, however, we are responsible; she died of hæmorrhage from placenta prævia centralis. The case will be referred to when the cases of placenta prævia are being considered.

#### CASES OF CONTRACTED PELVIS.

I think Dr. Jardine remarked, in one of his most interesting reports to this Society on the work of the West-End Branch of the Maternity Hospital, that the number of contracted pelves one meets with in the district is not very numerous. I can fully corroborate this statement, for in looking over my notes I find only about a dozen cases where the pelvis is described as being deformed. I will refer to only four of these, for they were the only ones where there was any very great difficulty in the delivery. Three of these were examples of the rachitic flat pelvis, the fourth was a justo-minor pelvis of a slight degree. In all the delivery was by forceps, except one in which craniotomy was performed. I may remark in passing that I prefer forceps to version in moderate degrees of flat pelvis where the child has reached full time.

CASE I.—In this case, the one in which craniotomy was performed, the pelvis was most deformed. The conjugata vera measured 3 inches. The patient was a primipara, aged 20. When called by the nurse to see her, I found the os fully dilated, membranes ruptured, cord prolapsed, pulseless, flabby, with head lying transversely, and only slightly fixed at the brim. The case was in exactly the same condition when nurse first saw her half an hour before my arrival. The child being dead, I perforated, and completed the delivery. She was told to be sure to return at the beginning of the seventh month and have labour induced should she again become pregnant. She took my advice, for, when pregnant for the second time, she consulted a well-known physician in the district, who, recognising the condition, induced labour at the middle of the seventh month—child presented by breech, but there was great difficulty with the after-coming head, which was finally delivered with forceps. Child was dead.

In the other cases of contracted pelvis the delivery was by forceps. I have been in the habit until lately of always using Neville's axis traction forceps—in the following case, however,

I used Cameron's:—

CASE II.—Patient, aged 23, third pregnancy. In the first pregnancy, labour was induced in the Glasgow Maternity Hospital at the beginning of the eighth month. Child was born alive by the natural forces. The second pregnancy—a plural one—terminated spontaneously at the beginning of the seventh month. There was then also no difficulty. pregnancy, the one at which I attended, she had allowed to go on to full time, although warned never to do so. The pelvis

was a scolio-rachitic one, with more room to right of sacral promontory. In the report of her first confinement in the Hospital Journal, the conjugata vera is stated as being 3½ inches. I was inclined to think it was under that figure by a quarter of an inch. Head was lying in the transverse diameter of the pelvis, very slightly fixed at brim; the occiput was towards the more roomy side—the right. The os being fully dilated, I applied Cameron's forceps. Delivery was easy; very little force was necessary in getting the head through the brim. Child was a well-developed female, and cried lustily immediately after its birth. I have noted in my journal regarding this case:—" Undoubtedly everything was in favour of getting a living child through in spite of the deformity of pelvis present. The head was not large, was very mouldable, and there was greater room in the pelvis to the right side, and fortunately the occipital end of feetal head was directed to that side."

CASE III.—In this, the third case of rachitic flat pelvis, there was but little difficulty in delivering with Neville's axis traction forceps. The conjugata vera measured 3½ inches; the right side again was more roomy than the left. The head entered the pelvis with its long axis in the transverse diameter of the pelvis, and with the occipital end towards the right—the more roomy side. The child, a mature one, was smaller than normal. The forceps caught the head obliquely—one blade over side of forehead, other over side of occiput. There was left facial paralysis, which disappeared in a day or two.

CASE IV.—In this case the pelvis was a justo-minor of a slight degree. The presentation was a first vertex. I had great difficulty in getting the child's head through the brim, for, in addition to the deformity of the pelvis, the child was a very large one, and the head moulded badly owing to the extent to which ossification had advanced. It also was born with left facial paralysis, but otherwise seemed perfectly healthy. When about a week old, however, it was seized with generalised convulsions, and died in a day or two. I have no doubt that during delivery in this case some injury had occurred to the brain or upper part of spinal cord. A post-mortem examination was unfortunately not allowed.

These cases of rachitic flat pelves are of interest, as illustrating what is well known, but is not sufficiently appreciated in practice—i.e., that in rachitic deformity of the pelvis it is extremely common to find one side of the pelvis more roomy than the other. So common is this, that as far as I have

seen, the majority of rachitic pelves are examples of the so-called scolio-rachitic deformity. The importance of this in practice is that in vertex presentations, whether the delivery is accomplished by the natural forces or by forceps, the passage of the head through the brim of the pelvis will be more easy or more difficult according as the occipital end of the child's head is directed to the more roomy or less roomy side.

Turning now to the cases of version, I find this operation was performed four times—twice for transverse presentations, and twice for placenta prævia. With the cases of transverse presentations there was no difficulty, and both the children were

born alive.

#### CASES OF PLACENTA PRÆVIA.

CASE I.—Patient, aged 35, sixth pregnancy. When I first was called to see her the os was the size of half a crown. There had been several attacks of hæmorrhage during the few days preceding labour. She was blanched to an extreme degree; pulse was rapid and intermittent. Placenta completely covered the os. I tried to reach margin of placenta, dilating os at the same time, but could not, and so pushed my finger through; found head presenting, turned, and extracted slowly as hæmorrhage had ceased. Child was not quite full time, was dead, with epidermis peeling off. Placenta was very large and thin. Intra-uterine douche given. She made an excellent recovery.

CASE II.—Also one of complete placenta prævia. It unfortunately terminated fatally. The patient had been bleeding some hours before she sent for assistance. The out-door house surgeon at the hospital kindly attended in my absence, performed version, and delivered as rapidly as possible. Unfortunately, however, she died almost immediately after. Child

was dead and premature.

Other Cases of Hæmorrhage.—Of accidental hæmorrhage we had a few cases. Only three were at all severe—there

was nothing, however, of any special interest.

With the cases of abortion there was also very little trouble. In one or two there was some difficulty with the placenta—sometimes the whole, sometimes portions of it being retained. I much prefer the finger to the curette for removing such retained portions, especially when the pregnancy has advanced beyond the third month.

Of Post-partum Hæmorrhage we had two severe cases—one especially so. In both, the children were born before the

arrival of the nurse.

CASE I.—Patient, aged 27, second pregnancy. In first, placenta had been adherent, and was removed by Dr. Jardine. When nurse arrived child was born, but placenta was retained, and she could not express it. Hæmorrhage was very profuse, indeed, before my arrival. I found patient gasping for breath, and quite pulseless. I expressed placenta, and with hot douching and ergotin subcutaneously, we got the hæmorrhage arrested. She made a slow, but good recovery.

CASE II.—Patient, aged 33, tenth pregnancy. Child was born before arrival. It was about six months old, and was macerated. Placenta could not be expressed; hemorrhage very severe. I introduced my hand and removed the placenta, after which uterus contracted so well that nothing further had to be done; the hemorrhage became completely arrested.

This last case illustrates very well the necessity of promptly removing the placenta by introducing hand into uterus if there is much hemorrhage during the third stage. By delaying, and trying to stimulate the uterus to contract by kneading, &c., the patient's life may be greatly endangered.

#### CASES OF CONVULSIONS.

We had only two cases of convulsions. One was a case of eclampsia occurring in a multipara, aged 25. Convulsions occurred in second stage. Dr. Brown, house surgeon at the hospital, kindly attended her in my absence. She had three fits before delivery, none after. Delivery was completed by forceps. Albumen was present in moderate amount until fourth day of puerperium, after which it gradually disappeared. She made an excellent recovery.

The second case was a multipara, aged 39. Convulsions came on in puerperium. They were limited to right side of body, right arm, leg, and face. Patient informed us that some years previously she received an injury to her head, and that ever since that time there had been a certain amount of paresis and rigidity of right side.

# LACERATIONS TO PERINEUM.

Tears in perineum, if at all extensive, are stitched at once. The results have not been very satisfactory. It is so difficult to keep the patient at rest, and, of course, without absolute rest and cleanliness little can be expected.

# CASES OF MASTITIS.

Abscesses of Mammary Glands.—I have had to open only on three occasions. In one, the only case I will refer to, the

right breast was very extensively affected. I had to make five incisions into it on several occasions. The patient was very ill, indeed, for a time, and presented many symptoms of septi-

cæmia; however, these passed away.

While speaking of this case, I may just give you an example of the ignorance and stupidity we have to contend with. After having made several incisions in the breasts and dressed the wounds one morning, I returned in the evening, hoping to find my patient much improved. What was my horror, then, in finding her instead blanched to an extreme degree, gasping for breath, and with a pulse almost imperceptible. The bed was saturated with blood, and there was still a little blood oozing from the wounds. I asked why they had not sent for either nurse or myself—we were both quite near at hand. The mother, who was in attendance, replied quite seriously, "Oh! but, doctor, we thought that was the bad blood coming away from her." So far through was the patient, that I was on the point of transfusing; however, with arrest of the hæmorrhage, and saline injections per rectum, she gradually improved. I was greatly indebted to the matron of the Sick Poor and Nursing Association for her kindness in sending nurses to attend to this patient, for so ill was she that for several days and nights a nurse had to be in constant attendance.

#### CASE OF CARDIAC DISEASE.

The only case that had to be sent to the hospital was a young woman with valvular disease of the heart. I sent her to the hospital because she required constant nursing. It was the patient's fourth pregnancy. She was suffering from mitral disease, with evidences of both obstruction and regurgitation. As pregnancy advanced she gradually became worse, until she died in the most wildly maniacal condition.

# SEPTIC RASH.

In one of the cases a well-developed rash appeared during the puerperium. It was Case III of contracted pelvis. The rash appeared on the second day of the puerperium, and resembled the early stage of a measles one. It was distributed over the extensor surface of the arms and legs, but especially over the elbows and knees; also, but less markedly, over the buttocks and lower part of back. There were evidences of some slight septic absorption. The temperature was raised slightly above normal, and the lochia were fætid. With vaginal douching, however, the temperature fell to normal, and the

lochia lost their feetid odour. The rash disappeared after two days. It was evidently a septic one—the distribution and appearance, along with the feetid lochia, pointed to that.

#### THE CHILDREN.

The presentations were—Facial, 3; breech, 31; transverse, 2; funis with vertex, 2; the rest were vertex presentations, but the relative frequency of the different positions I cannot give, as in only a few of the cases was I present at the birth.

There were three cases of monstrosities—one case of anencephalus, one of exomphalos, and one which nurse could not describe, and most unfortunately destroyed. We had a case of spina bifida—it was situated in the lumbar region—the child only lived ten days. In one case a macerated feetus of seven months was expelled with the membranes and placenta entire. Twins occurred 13 times. Presentations were—Both head, 6 times; head and breech, 4 times; breech and head, 3 times. As I was present at none of these births, I cannot say anything regarding the placentæ.

It speaks very highly for the skill of the nurses in charge that amongst cases of breech presentations occurring at full time there was a mortality of only 7 per cent—I say it speaks highly for the nurses, because with most of the cases they were unassisted, and had sole charge of the delivery.

Such, then, Mr. President and Fellows, are a few of the cases that have interested me in the work of the West-End Branch of the Maternity Hospital during the past two years. I hope the details of them have not wearied you, for they are very ordinary cases. You are all meeting with similar ones daily. In conclusion, I have only to thank those medical men who have assisted me from time to time, and have attended to the work during my absence. Particularly would I thank Drs. Hunter and Riddell. My best thanks are also given to the nurses, who have been untiring in their attention to the patients and in their conscientiousness in following out my instructions.

Dr. Jardine said it spoke well for Dr. Kerr's supervision of his district that there were only two maternal deaths. One death had taken place from placenta prævia. He had seen her a few weeks before owing to hæmorrhage, and had sent her to the West-End Branch. At the time of a second bleeding, he found she had been out on the street about the New Year, and had been carried home drunk. He corroborated Dr. Kerr's experience regarding the small proportion of pelvic deformities. He (Dr. Jardine) had met with considerable

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success in the immediate repair of the perineum. He invariably douched with perchloride solution, 1 in 2,000, or even stronger, following this up immediately afterwards with a douche of boiled water.

Dr. J. Coulson Howie considered Neville's forceps, to which Dr. Kerr had referred, to be one of the most useful forms of forceps. With regard to douching, he took the temperature at every visit, and if it rose above 100° he gave a vaginal douche, and if it did not fall gave an intra-uterine douche later on. He believed he got quite as good results with boiled water as with corrosive sublimate solution.

Dr. Oliphant asked at what time the abscess of the mamma appeared in his cases, and Dr. Kerr replied about the twelfth

day in one case.

Prof. Murdoch Cameron referred to the difficulty that had been experienced in applying his antero-posterior compression forceps in one of the cases, and said the difficulty was due to want of practice in applying a new form of forceps. He had already pointed out that with the ordinary axis traction forceps the head of the child was almost invariably caught in a semi-oblique position. Comparing forceps with version, he believed the child had a better chance with the forceps. In craniotomy, he liked to perforate through the sutures and not through the bone. As to the douche, he considered it necessary in hospital practice, but he was not so sure of the necessity for it in other cases. He never used it among respectable private patients, and as a result he never saw septic complications. When a douche had to be given he used corrosive sublimate solution, 1 in 2,000. Regarding suppuration of the breasts, patients were to blame for not putting the child to the breast, and not suspending the breasts. He had never seen such alarming hæmorrhage as had occurred in the case recited by Dr. Kerr.

Dr. Bulfour Marshall said that Dr. Kerr's report presented a large field for discussion, and it was important to bring such work before the Society. He had always used Milne Murray's forceps, and applied it antero-posteriorly, taking it off, and reapplying it, if necessary, as the head changed its position. He sugggested a trial of the Walcher position, and referred to a case in which it had been helpful in his experience. He took exception to dilatation of the os uteri in central placenta prævia. He would do bipolar version in such a case. The douche should not be used at all, unless for gonorrheal discharges. There was more risk in douching afterwards than in not doing it at all. External palpation should be used for diagnosis.

#### REVIEWS.

A Treatise on the Surgery of the Alimentary Canal. By A. ERNEST MAYLARD, M.B., B.S. (London), Surgeon to the Victoria Infirmary, Glasgow. London: J. & A. Churchill. 1896.

In the art of surgery, as in most other departments of labour, the tendency has been to subdivision. This specialising of surgery into departments has a tendency to perfect the technique of the operator as well as the skill of the diagnostician; but, at the same time, it may also have a partial narrowing effect, and we think it also leads to over-operating in special cases. The particular sphere of surgery which Mr. Maylard discusses in his handsome volume is one which has developed with great rapidity during the last few years, and this progress has been, to a great extent, due to men devoting their special, if not their entire attention, to abdominal surgery, but now our author only takes up a section of abdominal surgery-viz., that which has to deal with the œsophagus, the stomach, the small and large intestines, and the rectum. When we read recent works on abdominal surgery, we would almost be led to believe that it was an entirely modern department of our art. Truly, it is new, in the sense that it is now successful in the light of the gospel of cleanliness thrown upon it by Lister; but, at the same time, the technique of many operations even as now performed is old. and was probably better known in the early part of the last century than in the middle of this one. By our present writers, the admirable work done by Heister, Dionis, and by Roussetus, has been forgotten or ignored, and one might believe that the abdomen was entirely neglected surgically until within the last twenty years. The success of abdominal surgery in the present day is due to three advantages which we possess over the surgeons of the past—viz., the power of producing anæsthesia, the understanding of the necessity of absolute cleanliness, and the knowledge which gives us courage to operate at an early stage in the disease.

This book, of 698 octavo pages, is divided into four parts, and the arrangement of the work is regional, as being better suited for the exposition of the subject from a surgical standpoint. The first part, occupying 143 pages, is devoted to a careful consideration of the surgical anatomy and physiology

of the resophagus, followed by a consideration of injuries, impaction of foreign bodies, inflammatory affections, ulcers, tumours, cicatricial stricture, paralysis and spasm, and abnormalities. The second part of 126 pages deals with the surgery of the stomach, while the third part, under three sections, occupying 291 pages, deals with the duodenum, jejunum and ileum, the large intestine, and the vermiform appendix. In the fourth part, occupying 139 pages, the diseases of the rectum are discussed. In each of these parts, the subject is very carefully and systematically gone over, and the classification in each is similar to what has been indicated under Part I.

Mr. Maylard in each part delineates fully the surgical anatomy and physiology to begin with; he then describes and illustrates, both from cases in his own practice and from cases recorded by others, the injuries and diseases to which the various parts of the alimentary tract are liable, and finishes each part by a careful description of the operations required in treatment. Such is the general scheme of the work, and in carrying it out Mr. Maylard has been remarkably successful. He has presented the profession with a large collection of important facts and observations, well illustrated by descriptions of specimens from the extensive and valuable collections in the Pathological Museums of the Royal, the Western, and Victoria Infirmaries, together with a few from the Hunterian collection. The author also quotes largely from the experience of other workers in this most interesting field of enquiry, and he is careful in all instances to indicate the sources of information. The author also quotes from his own personal experience, which is of great value, but at the same time we cannot help feeling that if anything the book is rather overburdened. with cases. It is difficult for the reader to weigh their relative value, and we feel that the quantity of material is so large, and the quality so good, that we wish it had been made even more valuable to the reader by a deeper stamp of the individuality of the author.

The statistical part of the work is not quite up to date; for example, under operations for ulcer of the stomach, we find no reference to the excellent monograph by Comte, of Geneva, nor is the brilliant record of Doyen 1 referred to. He publishes twenty-one operations of gastro-enterostomy without a death. Also, under treatment of intussusception, we fail to find a reference to Professor Braun, of Jena, 2 who must be recognised

<sup>2</sup> Archiv f. Clin., Bd. xxxiii, Hft. 2.

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<sup>&</sup>lt;sup>1</sup> Traitment Chirurgical des Affections de l'estomac et du duodenum, 1895.

as an authority on the subject, and most conspicuous by their absence are the very complete statistics upon appendicitis by Porter.<sup>1</sup>

The work is illustrated by 117 plates, many of them taken by photographic process, from specimens in the museums, and this forms a most useful and important part of the work. The book is well printed, and it is altogether a very handsome volume. We can confidently recommend it as a work of the highest value to surgeons and practitioners who desire to gain a special knowledge in the department of abdominal surgery of which it treats. On the part of the author it shows not only much research and industry, but also marked power of careful and painstaking clinical observation, and the book is written in an agreeable, lucid, and unaffected style. It is our pleasant duty to congratulate Mr. Maylard upon the successful termination of a most useful piece of work.

Forensic Medicine and Toxicology: a Manual for Students. By C. O. HAWTHORNE, M.B. Second Edition. Glasgow: A. Stenhouse. 1897.

THAT this little manual has been of service to those for whom it was intended is obvious from the fact that it has reached a second edition. Regarding the work generally the author must be congratulated on his labour, inasmuch as he has skilfully and intelligibly condensed in lucid language most of the salient facts of medical jurisprudence. At the same time, however, it cannot be said that omissions or obscurities are absent from its pages. For example, the student is in nowise guided as to the forms and kinds of legal documentary evidence required to be given in medico-legal cases. and not a word is said as to the difference in this respect between the law of England and that of Scotland. That this is not trifling has been amply shown by jurors, who have been unable through illness to attend court, and who have forwarded a medical certificate which has been invalid, having in consequence been mulcted in the statutory penalty. We observe that, following the traditions of the text-books, the author devotes some attention to footprints and the examination of firearms. These are not now, as they ought never to have been, referred to the medical witness. Ne sutor ultra crepidam. In the post-mortem appearances of death from cold, the author omits that sign upon which the late Professor

<sup>1</sup> American Journal of Medical Science, 1893, vol. cvi.

Ogston insisted as of much value—having had exceptional opportunities of observing this kind of death—viz., the presence of irregular and diffused dusky-red patches on the skin of limited parts of the body which are non-dependent; and while some attention is given to death by "lightning," not a word is said respecting death by electricity, even in view of the fact that in the State of New York the legal form of homicide is "electrocution." So also in death by burning there is no reference to vitriol-throwing or the effects of other corrosive agents. Dr. Hawthorne devotes some detailed attention to death by drowning, and he defines it very properly as follows:-"A person is drowned when air is prevented entering the respiratory passages by the immersion of the entrances of those passages in a fluid or semifluid medium." But he goes on to say that "in some cases death is not, or not purely, by asphyxia," since from fear of death, or shock after falling from a height, syncope may be produced; or a person may be comatose before he reaches the water, from intoxication or from his head striking some object in his fall from a height. "In such cases," says the author, "there may be little or no effort at respiration." In these cases. therefore, according to the author's own definition, where no effort at respiration is made, and where death occurs in the water, the cause cannot be due to drowning, since respiration is not interfered with, because there is no effort. It is obvious that if a person who falls alive into the water, no matter what his condition be, attempts respiration after submersion and then dies in the water, the proximate cause of death will be drowning, although the post-mortem appearances of it may not bulk largely and other pathological conditions appear more prominently; but it is equally obvious that where no attempt at respiration is made after submergence till life is extinct, there can be no interference with that function, and, therefore, although the person may have died in the water. the cause of death was not drowning. It is difficult indeed to conceive a condition where the respiratory function is so inhibited that no attempts are made to breathe when in the water; and consequently, where the death "is not by asphyxia," the cause cannot be drowning. On the subject of wounds the author is not so clear as might be wished. Is it correct to say that "lacerated wounds . . . are generally due to accident"? We opine not. In relation to their cause they may be accidental, but they are very frequently the result of applied violence. It would appear, however, that the author follows Taylor's classification of wounds, and

includes under the name of contused wounds what are more usually denominated lacerated wounds. We note also some hasty generalisations in this manual. For example, in cutthroat wounds where "there are distinct cuts on the bodies of the cervical vertebræ . . . the case is almost certainly one of homicide." One of the most undoubted cases of suicide we have seen bore those very marks; and they are by no means so uncommon in suicide as the generalisation would lead us to believe. Neither is it wise to dogmatise regarding the differential diagnosis of homicidal and suicidal cut-throat wounds, nor that self-inflicted wounds are usually superficial Serious self-produced injuries are common in or numerous. persons of unsound mind, and by no means unknown even in cases where the person is of sound mind, as witness the notorious case in which a man laid bare his testis on one occasion, accused two neighbouring farmers of the crime, who were tried, convicted, and sentenced to a long term of imprisonment; on a second occasion the same man was found with a similar lesion of the other half of his scrotum. his death he confessed that he had wrongfully accused those two men, whereupon, the case being brought before Parliament, they were liberated and awarded a sum of money as solatium. The section on toxicology is very carefully and compendiously treated, and the student will find therein all that he need know for examinations. We should like however, if, in the treatment of cases of poisoning, the author would lend his advocacy toward the disestablishment of the stomach-pump and the substitution of the stomach-tube. The former cannot do more than the latter, while it may do harm in the hands of the awkward, the nervous, or the excited, which the tube cannot do. Notwithstanding what has been said, it is due to the author to say that he has accomplished his task in a praiseworthy manner.

Transactions of the Eighteenth Annual Meeting of the American Laryngological Association, 1896. New York: D. Appleton & Co. 1897.

This volume contains a series of thirty-nine papers, a fact which serves to illustrate the amount of work done in this branch of medicine in the States. The papers on the sequelæ of syphilis affecting the nose and throat occupy a considerable part of the volume. Dr. Knight's paper on the use of a metal bridge to correct the deformity caused by syphilitic necrosis

of the septum is interesting, and two plates are given showing the condition before and after the insertion of the bridge. Dr. Nichol describes a new plastic operation for cicatricial strictures of the pharynx and soft palate. This operation is certainly ingenious, and he seems to have attained good results from it in twelve cases.

Solomon Solis-Cohen discusses the therapeutic value of various new drugs in laryngeal tuberculosis. The inevitable discourse on deviations of the nasal septum is given, and Dr. Watson has devised a new operation for this annoying condition. The discussion following this paper was long, but to none of the numerous speakers did it occur that sometimes the septum might be left alone! Laryngeal photography is described by Dr. French, and some of the plates given show the condition of the affected parts remarkably well.

Other papers of interest are—"The Pathological Anatomy of Ethmoid Disease," by John Nolan Mackenzie; "Naso-Pharyngeal Fibroma," by Dr. Ingals; "Intubation in the Adult," by Dr. Casselberry; "Malignant Disease of the Larynx," by Bryson Delavan, M.D.; "Sarcoma of the Nasal Chambers," by Arthur Ames Bliss, M.D.; "Tracheal Stenosis," by Samuel Johnston, M.D.; "Prophylaxis of Nasal Catarrh,"

by Carl Seiler. &c.

The Student's Medical Dictionary, Based on Recent Medical Literature. By George M. Gould, A.M., M.D. Tenth Edition, Rewritten, and Enlarged. London: H. K. Lewis, 1896.

We have great pleasure in recommending this work to the favourable notice of our readers. It is practically an abridgement of the larger *Illustrated Medical Dictionary*, and so far as we have been able to consult it, it seems to be admirably suited to the wants of medical students, and even of practitioners. It is provided with tables of eponymic diseases, ptomains, muscles, nerves, &c., and altogether is a very serviceable compilation.

The Year-Book of Treatment for 1897. London: Cassell & Co., Ltd. 1897.

THIS annual has long since established itself as a necessity for the practitioner who desires to keep himself informed of the important therapeutic movements of the day. The number of journals and magazines is now so great, and the contributors

to medical literature so truly legion, that there is danger lest the medical man, anxious to get help from all quarters, shall fall into the unfortunate position of the gentleman described by Lord Rosebery, who, spending all his day in reading everything written about the political questions of the hour, finds himself without time to apply the truth even when he has discovered it. To save the practitioner from this fate the Year-Book was invented, and the fact that the invention has stood the test of thirteen years is abundant testimony to its practical value. If any of our readers do not know the Year-Book, the sooner they are introduced to it the better for themselves.

# ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

#### MEDICINE.

By W. R. JACK, M.D. B.Sc.,

Hæmorrhage from the Healthy Kidney.—Klemperer (Deutsche Med. Wochenschrift, 25th February and 4th March, 1897) introduces the subject by citing cases of vicarious menstruation, and of hæmorrhage from the healthy kidney is possible. A hysterical woman under his care suffered from copious hæmoptysis, dying six weeks afterwards from other causes. The lungs were found absolutely normal. A youth of 27 vomited a litre of blood. He was admitted into hospital four weeks afterwards with severe enteric, and died in a fortnight. There was no active lesion, no cicatrix, not even hyperæmia to be found in the stomach. Klemperer then refers to the hæmorrhages in the adrenals, stomach, and lungs produced experimentally by injury to certain parts of the nervous system, and proceeds to give a list of the already recorded cases of renal hæmorrhage where surgical interference resulted in the discovery of a healthy kidney. In all of them profuse renal hæmorrhage had existed for a considerable time, sometimes accompanied by attacks of lumbar pain and by lumbar tendeness. In all of them the operative interference proved the complete anatomical integrity of the bleeding kidney. One case died shortly after operation; the others all resulted in cure, whether the kidney was removed or merely exposed and replaced. In one case (Passet's) the bladder was opened and the ureters catheterised, the source of the blood being found in the right kidney. The proposed nephrectomy had to be postponed owing to the patient's condition; but after the preliminary operation the hæmorrhage entirely ceased.

With regard to the nature of the bleeding, Klemperer objects to the terms "essential hemorrhage," "local hemophilia," and "hematuric nephralgia," as conveying no explanation. The bleeding can only be of nervous origin. It cannot be due to irritation of the vaso-motor nerves, as that could not last so long. Hence it is probably due to paralysis of the vaso-constrictors, leading to dilatation of the vessels and increased penetrability of their walls. It is an angio-neurotic hemorrhage, analogous to angio-neurotic cedema. This

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view is the only possible explanation of the varying methods. The different operations have been effectual by suggestion, and not as surgical procedures. In one case (Legueu), where the left kidney was exposed and replaced, hemorrhage was absent for months, until the patient accidentally learned

that no stone had been removed.

Klemperer then refers to Senator's case of renal hæmophilia, in which there was hæmorrhage from a healthy kidney in a member of a hæmophilic family. He considers the case to be of angio-neurotic origin like the rest, and finds Senator's name for it inappropriate. He goes on to give details of six cases occurring in his own practice. In two of these a copious renal hæmorrhage occurred after violent exercise, and completely disappeared after a few days' There was no abnormal constituent in the urine except blood-corpuscles and blood-casts, proving the renal origin. Both patients were rapidly restored to complete health. He explains these cases as due to active hyperæmia, leading to rupture of the smallest vessels, which rapidly heal under the influence of rest. They are not strictly hæmorrhages from a healthy kidney, but rather akin to "traumatic" hæmaturia. He mentions them because they affect perfectly healthy individuals, and leave the organs in a perfectly healthy condition.

Next come two instances of hæmaturia in hæmophilic patients, one ceasing spontaneously, the other leading to grave anæmia, and finally disappearing

under treatment by hydrotherapy.

Lastly, two cases of angio-neurotic hæmaturia are recorded. The first occurred in 1890. The hæmorrhage proceeded from the left kidney, which was extirpated, and found to be completely normal. The patient has been perfectly healthy ever since. In the second case, in the light of more recent experience, no operative treatment was undertaken, the hæmorrhage, which lasted in all for six weeks, disappearing under treatment by hydrotherapy. It has remained absent for five months, and the patient has greatly gained in weight. The ordinary causes of hæmaturia could be excluded with certainty. Klemperer comes to the following conclusions:-

1. Bodily overstrain may lead to a quickly passing hamaturia, attended by

no evil consequences.

2. The hæmaturia of hæmophilics and angio-neurotic hæmaturia must be

kept in mind in the diagnosis of chronic renal hæmorrhage.

3. The hæmaturia of hæmophilics is only to be diagnosed when, both in the family and in the patient, there is undoubted evidence of hæmophilia. In these cases no operation should be attempted, not even cystoscopy.

4. Angio-neurotic hæmaturia is to be diagnosed if the urine contains no pathological constituent except blood, and the kidney be not enlarged. The renal origin of the blood may be proved by lumbar tenderness, by blood-casts, or by cystoscopy.

5. Some angio-neurotic hæmorrhages, associated with attacks of pain, are very similar to cases of renal colic. The pain is less severe and of shorter

duration, and may be influenced by suggestion.

6. The diagnosis of angio-neurotic hæmorrhage should only be made after several weeks' observation.

7. The treatment consists in absolute rest in bed, a diet principally of milk,

suggestion, and hydrotherapy.

8. Exploratory exposure of the kidney should only be attempted after the

failure of medical treatment.

9. If the kidney be found healthy it should be replaced and the wound closed, awaiting the psychical effect of the operation.

Hereditary Syphilis.—Düring (Deutsche Med. Wochenschrift, 25th March, 1897) has during the last year been studying the laws of hereditary syphilis in Asia Minor. His paper is an abstract of results to be published later in more detail, and deals principally with two points. The first of these is that the immunity of the healthy children of syphilitic parents from acquired syphilis is even less lasting than is commonly supposed. Acquired

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syphilis may appear in such children while still quite young, or even in individuals with distinct marks of hereditary syphilis. He cites four families in support of this view. Briefly, they demonstrate the gradual extinction of hereditary syphilis in successive children, until one is born apparently healthy, and contracts syphilis at 3 from kissing; they show, too, that even at the age of 7 children unmistakably suffering from hereditary syphilis may acquire the disease de novo.

His second point is that syphilis may be inherited in the third generation, as Hutchinson has stated, and that such an inheritance is in Asia Minor not rare but frequent. This he supposes to be due to the recent appearance, and therefore the greater virulence, of the disease, which in Asia Minor is not more than four generations old. The great frequency of tertiary lesions is also explicable on this hypothesis. Five families are cited on this point, in all of which syphilis was acquired in the first generation, and transmitted through the second to the third. Great pains were taken to exclude cases in which the disease might have been reacquired in the second generation. In these histories it appears that in "malignant" syphilis even tertiary lesions are hereditarily transmissable.

The Schott Treatment of Heart Disease.—Doubt has from many sides been expressed with regard to the rapid diminution in the size of a dilated heart following upon the use of the exercises or baths devised by the brothers Schott. In order to settle the question Th. Schott (Deutsche Med. Wochenschrift, 1st April, 1897) carried out a series of experiments with the Röntgen rays. Children were chosen for the purpose, as in them cardiac photography is more satisfactory than in the adult. Photographs were taken both before and after a bath or a set of exercises. The vacuum tube and the photographic plate were placed below a table on which the patient lay, and were always kept at the same distance from the body and in the same position relative to it. Small leaden plates were laid over the nipples, appearing in the photographs as dark circles, from which the position of the cardiac outlines could be measured. Absolute rest was enforced for a considerable time before each photograph was taken, whether before or after a bath or set of exercises. The results uniformly bear out the contention of the Schotts that the diminution of the cardiac dulness corresponds to an actual diminution of the size of the heart. In one case, for example, of mitral insufficiency with dilated heart, occurring in a boy of 81, the transverse measurement at the fourth rib before exercises lasting fifteen minutes was 12:3 cm.; after the exercises, 11.2 cm. The position of the diaphragm was also higher, showing a diminution in the volume of the heart. In another instance, a girl of 14, suffering from cardiac debility, was placed in an effervescing bath (to and from which she was carried) for ten minutes. The greatest transverse diameter of the heart before the bath was 11 1 cm.; after the bath, 10 3 cm. In the outlines reproduced in the article the differences are strikingly manifested.

# DISEASES OF THE EYE.

#### By FREELAND FERGUS. M.D.

Sympathetic Ophthalmia. Case in Ophthalmic Review for April, 1897.—The affection set in after an injury involving rupture of the sclerotic while the conjunctiva was still intact. The case is worthy of record because the sympathetic ophthalmia did not set in till twenty-seven days after enucleation.

Theory of Accommodation. Synopsis of papers in the Ophthalmic Review for February, 1897, by Mr. Priestley Smith.—Helmholtz's original

idea was that the ciliary muscle acted by freeing the zonule, and thereby allowing the lens to bulge forwards by its own elasticity. Tscherning's theory, as explained by himself at Edinburgh, is that there are two parts of the ciliary muscle. The external is longitudinal in direction and thin; the deeper part is composed of fibres which are at first longitudinal, but which ultimately become circular. Tscherning believes that the increase of curvature at the centre of the lens in accommodation is accompanied by a flattening at the periphery. Therefore, in accommodation for a near point, the periphery of the lens is made flatter by traction on the zonule. Tscherning thinks that this is brought about by the anterior part of the deep portion of the ciliary muscle, while the posterior portion counteracts any tendency of the lens to salio backwards.

slip backwards.

The facts in support of this theory are numerous. First of all, there are some exceedingly suggestive facts of spherical aberration. Then there are some exact measurements of the refraction of different parts of the field made by a modification of Scheiner's well-known experiment. Then Tscherning takes phakometric observations, and last of all he concludes with some experiments on living animals. From all these sources evidence is obtained that, in the act of accommodation, the periphery of the lens flattens and the

centre alone becomes more bulging.

Stadfelt, experimenting in the Sorbonne, found that the curvature was greater when the lens was in the eye than when it was out of it. He was able to prove by direct experiment that the removal of traction of the zonule flattened the surface of the lens.

Hess has shown, in eyes in which iridectomy has been done, that with eserin the circumlentile space is diminished, and that with atropine the

reverse is true.

In the last number of the Royal London Ophthalmic Hospital Reports Mr. Devereux Marshall gives a very interesting account of five cases of enucleation which have proved fatal. In all the cases the operation was undertaken for panophthalmitis, and in each the cause of death was purulent meningitis. It is further to be noted that in all except one a portion of the purulent contents of the eyeball escaped into the freshly-cut tissues of the orbit. These cases are very important, and are well worthy of being recorded. It is still a matter of doubt with many whether or not in panophthalmitis enucleation should be performed. Mr. Marshall answers the question in the affirmative, notwithstanding the unfortunate results here recorded. In the course of the paper he makes a strong effort to lay the blame of the meningitis on other causes than the operation. While we admit that with a certain amount of success this may be done, it is all important to know if it must be done. This is not the place to enter critically into Mr. Marshall's arguments, yet we cannot help thinking that they savour somewhat of special pleading. We do not wish to be prejudiced in the matter, still less do we wish to prejudice our readers: what we want is information in such a momentous problem.

Two points seem to us to be of value in solving the question; we respectfully suggest them to Mr. Marshall, for no one is in a position to give fuller and, we feel sure; more straightforward information:—(1) From the year 1861 till now, how many cases of direct traumatic panophthalmitis have been seen in Moorfields in which there has been no enucleation, but which have been followed by septic meningitis? (2) We notice from the interesting paper under discussion that at Moorfields from 1861 to 1880 there were no deaths from meningitis after excision, "but since then 8 fatal cases have occurred, or 0·12 per cent of the total number of excisions." In view of this statement, it would be interesting to know if the practice at Moorfields has during these last sixteen years altered at all as to the removal of the eye in pan-

ophthalmitis.

We make these suggestions in no captious spirit, but from a desire to have a problem solved to which no authoritative answer has yet been given.

# Books, Pamphlets, &c., Received.

The Disorders of Digestion in Infancy and Childhood, by W. Soltau Fenwick, M.D., B.S. Lond. With Illustrations. London: H. K. Lewis. 1897. (10s. 6d.)

Some Aspects of Infantile Syphilis, being the Hunterian Lectures delivered at the Royal College of Surgeons in 1896, by J. A. Coutts, M.B. London: Rivington, Percival & Co. 1897. (3s. 6d.)

On Aphasia, by Wm. Elder, M.D. London: H. K. Lewis. 1897. Report of the Council of the Dublin Sanitary Association for 1896, with President's Address. Dublin. 1897.

Influenza, with Special Reference to some Peculiar Symptoms, by William Grey, M.D. (Edin.) London: H. K. Lewis. 1897. (3s. 6d.)

Problems of Nature, Researches and Discoveries of Gustav Jaeger, M.D. Edited and translated by Henry G. Schlichter, D.Sc. London: Williams & Norgate. 1897.

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Lectures on Pharmacology by Dr. C. Binz. Translated by Peter A.

Latham, M.D. Vol. II. London: The New Sydenham Society.
1897.

The Life and Times of Thomas Wakley, Founder and First Editor of the Lancet, Member of Parliament for Finsbury, and Coroner for West Middlesex, by Squire Sprigge, M.B. With Two Portraits. London: Longmans, Green & Co. 1897. (18s.)

The Deformities of the Fingers and Toes, by William Anderson, F.R.C.S. London: J. & A. Churchill. 1897. (6s.)

Derby Borough Asylum: Eighth Annual Report. 1896.

Exercises in Practical Physiology, by Augustus Waller, M.D., F.R.S.
Part III: Physiology of the Nervous System and ElectroPhysiology. London: Longmans, Green & Co. 1897. (2s. 6d. net.)

The Distribution of Tuberculous Diseases in Glasgow, with Observations on the Relation of Phthisis to Room Density, by A. K. Chalmers, M.D. Glasgow: Robert Anderson. 1897.

Practical Handbook on Diseases of the Eye, by D. Chalmers

Practical Handbook on Diseases of the Eye, by D. Chalmers Watson, M.B. Edinburgh: Wm. F. Clay. 1897 (4s. 6d. net.)

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. Batty Tuke, M.D., and D. Noël Paton, M.D. Vol. VI. Edinburgh: Wm. F. Clay. 1897. (8s. 6d. net.)

Diseases of the Ear, Nose, and Throat, and their Accessory Cavities, a Condensed Text-book, by S. Scott Bishop, M.D. Philadelphia:

The F. A. Davis Company. 1897. (5 dols. net.)

Year Book of the Scientific and Learned Societies of Great Britain and Ireland. Fourteenth Annual Issue. London: Charles Griffin & Co., Limited. 1897.

# GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR THE FOUR WEEKS ENDING 22ND MAY, 1897.

	Week ending			
	May 1.	May 8.	May 15.	May 22,
Mean temperature,	46·4°	45·5°	46·9°	52-2°
Mean range of temperature between day and night, .	15·3°	14·0°	15·9°	24 <i>-</i> 2°
Number of days on which rain fell,	4	5	1	·
Amount of rainfall, . ins.	0.41	1.19	0.19	
Deaths registered,	283	320	294	305
Death-rates	20.6	23.3	21.4	22-2
Zymotic death-rates,	3.8	3.6	3.8	3-2
Pulmonary death-rates, .	6-2	7.9	5.2	5.8
Draths—				
Under 1 year,	69	54	60	69
60 years and upwards, .	44	51	52	53
DEATHS FROM-				
Small-pox,		•••	•••	•••
Measles,	12	15	16	15
Scarlet fever,	1	•••	4	3
Diphtheria,	3	5	4	2
Whooping-cough,	24	21	12	16
Fever,	6	3	1	2
Diarrhœa,	6	6	15	6
Croup and laryngitis, .	1	•••	4	3
Bronchitis, pneumonia, and			40	00
pleurisy,	55	73	46	63
Cases reported— 'Small-pox,				•••
Diphtheria and membranous				
croup,	11	7	13	5
Erysipelas,	16	14	10	18
Scarlet fever,	39	41	42	41
Typhus fever,		•••	<b></b>	•••
Enteric fever,	16	15	12	18
Continued fever,				•••
Puerperal fever,			3	1
Measles,*	157	164	147	104

<sup>\*</sup> Measles is not notifiable.



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